Men-at-Arms

OSPREY PUBLISHING

Armies of Ivan the Terrible

Russian Troops 1505–1700



V Shpakovsky & D Nicolle • Illustrated by Angus McBride

VIACHESLAV SHPAKOVSKY was born in 1954. He teaches in the History Department of Penza University in Penza, Russia, where he is a Candidate of Historical Research (Doctorate) and currently holds the position of Assistant Professor and Chief Historical Scientist. He has also written a number of articles on various aspects of Russian and military history for both academic journals and popular magazines in Russia.

DAVID NICOLLE was born in 1944, the son of the illustrator Pat Nicolle. He worked in the BBC Arabic service for a number of years, before gaining an MA from the School of Oriental and African Studies, London, and a doctorate from Edinburgh University. He later taught world and Islamic art and architectural history at Yarmuk University, Jordan. He has written many books and articles on medieval and Islamic warfare, and has been a prolific author of Osprey titles for many years. David lives and works in Leicestershire, UK.

ANGUS McBRIDE is one of the world's most respected historical illustrators and has contributed to more than 90 Osprey titles in the past three decades. Born in 1931 of Highland parents but orphaned as a child, he was educated at Canterbury Cathedral Choir School. He worked in advertising agencies from 1947, and after national service, emigrated to South Africa. He now lives and works in Cape Town.

CONTENTS

Men-at-Arms • 427

Armies of Ivan the Terrible

Russian Troops 1505–1700



V Shpakovsky & D Nicolle • Illustrated by Angus McBride

Series editor Martin Windrow

First published in Great Britain in 2006 by Osprey Publishing,
Midland House, West Way, Botley, Oxford OX2 0PH, UK
443 Park Avenue South, New York, NY 10016, USA
Email: info@ospreypublishing.com

ISBN 1 84176 925 8

Editor: Martin Windrow
Page layouts by Alan Hamp
Index by Alison Worthington
Originated by The Electronic Page Company, Cwmbran, UK
Printed in China through World Print Ltd.

05 06 07 08 09   10 9 8 7 6 5 4 3 2 1

A CIP catalogue record for this book is available from the British Library

Acknowledgements

The authors are indebted to several people for their assistance in the preparation of this book. Special thanks are owed to Vdovikina Ksenia, a post-graduate student at Penza University; to Liucijus Suslavicius from Lithuania; to Oleg Volkov from Sergiev Posad, the town around the ancient Troitse-Sergiev Lavra (the Monastery of the Holy Trinity and St Sergius); to the artist Aron Sheps from Tver, and to Olga Tumkina from Penza.

Measurements

Approximate conversions of old Russian units of measurement and weight found in this text are:

1 arshin	= 2ft 4in	= 28in
1 sajen	= 6ft 11in	= 83in
1 grivenok	= 1.1lb	
1 pud	= 36lb	

Artist's Note

Readers may care to note that the original paintings from which the colour plates in this book were prepared are available for private sale. All reproduction copyright whatsoever is retained by the Publishers. All enquiries should be addressed to:

Scorpio Gallery, PO Box 475, Hailsham, E.Sussex BN27 2SL, UK

The Publishers regret that they can enter into no correspondence upon this matter.

ARMIES OF IVAN THE TERRIBLE

THE TWO CENTURIES of Russian history immediately prior to the reign of Tsar Peter the Great (r.1689–1725) often seem rather insignificant when compared to his towering achievements. However, a closer study of this troubled, war-torn, yet fascinating period shows that Peter's momentous reforms were not the results solely of his own genius and firm grip upon the reins of power. Like all other events in history, they had what might be called a 'pre-history' which reflected the ambitions and achievements of previous generations. While the figure of Peter the Great dominated the history of Russia during the 18th century, the preceding 16th and 17th centuries also produced several leaders who had a profound impact upon the development of Russian culture and society, including Russian armies. The title of this book is chosen to commemorate the most renowned of those rulers, but the contents cover developments during that whole 200-year chapter in the history of Muscovy.

***Streltsi* shooting at the walls of Kazan from field fortifications, in a 16th-century Russian book of woodcuts. The city fell to the army of Ivan IV 'the Terrible' in 1552.**



The histories of all peoples occasionally produce statesmen and military leaders who, during their struggle to achieve and consolidate their power and that of their country, treat their subjects or citizens pitilessly. One such ruler was the Muscovite Grand Prince Ivan III Vasilievich – who was, in reality, far more 'terrible' then the next Ivan. Even so, Ivan IV Vasilievich certainly deserved the nickname of 'the Terrible', bestowed upon him largely because of the cruel methods he used to suppress the *boyars* – the powerful feudal lords of medieval and early modern Russia – whom he seduced into his power with considerable skill and ruthlessness. Ivan IV also established the *oprichnina* or Tsar's bodyguard corps; and he governed by means that have sometimes been called a 'terrorist dictatorship', which remained in the memory of the Russian people for centuries. One 17th-century Tsar, Aleksey Mikhailovich, gained by contrast the unflattering nickname of 'the Timid'; however, it was during his reign, and largely as a result of his efforts, that the Ukraine was incorporated into the Russian or Muscovite Empire. (Nor did that supposedly timid Tsar show any hesitation in butchering the powerful rebel Stepan Razin.)

From the confrontation in 1480 known in Russian history as the 'stand at the Ugra river', when two centuries of Tatar domination (the so-



Tower of the Nizhni Novgorod Kremlin, early 16th century. (Photo V. Shpakovsky)

called Mongol Yoke) was finally thrown off, up to the reign of Peter the Great just over 200 years later, the Russian state steadily expanded. This extraordinary and dramatic growth was virtually uninterrupted, and it would continue under Peter the Great and his successors – indeed, almost until the outbreak of World War I. As Russia grew bigger it also became more powerful; but Russia's hugely expanded landmass, numerous subject peoples, vastly long frontiers and increasing variety of often hostile neighbours meant that the Tsars needed much larger armies.

During the 16th and 17th centuries Russian troops fought against Tatar-Mongol and Polish invasions, and against Danish, Swedish and Livonian (Baltic) armies. The future genius of European warfare, King Gustavus Adolphus of Sweden, sharpened his military skills during some of these conflicts; while Ottoman Turkish forces, and the superb Polish 'winged Hussars', were defeated by what were at that time little more than bandits – the Zaporozhian and Don Cossacks. These centuries were not only the period when Muscovite Russia became a major military power; they were, more importantly, a time when Russia adopted and adapted both Eastern and Western, Asiatic and European military systems to produce something new and distinctive which was suited to Russia's specific needs. The 16th and 17th centuries were the period when Russia hung poised between its old, deeply rooted traditions and the modern Western European world. Tsar Peter the Great would complete his country's reorientation, turning the eyes of Russia westwards; yet it had been his ancestors and predecessors who had laid the foundations for this most momentous shift in the history of Russian civilization.

CHRONOLOGY

1462–1505 Reign of *Veliki Knez* (Grand Prince) Ivan III Vasilievich of the Principality of Moscow (Muscovy)

1502 The chronicles first mention 'urban cossacks' from Ryazan, who owed military service

1505–33 Reign of Grand Prince Vasili III Ivanovich

1507–08 War between Russia and Lithuania

1510 The lands of Pskov are joined to Muscovy. End of the autonomy of the *veches* (communal urban councils)

1512–22 War between Russia and Lithuania

1514 Moscow regains the city of Smolensk after 110 years of Lithuanian occupation

1520 Ryazan loses its independence and is united with Muscovy

1536 The Dnepr Cossacks *(Cherkasi)* are united into one organized 'host' (politico-military community)

1547–84 Reign of Ivan IV 'the Terrible', the first Muscovite Tsar of the entire Russian peoples

1549 First mention of the Don Cossacks, described as outlaws and robbers

1550 Edict of Ivan IV concerning the establishment and organization of the *streltsi* (musketeers), the first full-time military force in the history of the Russian state

1552 Muscovy-Russia conquers Kazan, capital of the Tatar-Islamic khanate of that name

1556 Russian forces seize Astrakhan, going on to occupy the steppe region and the northern

Caucasus mountains as far as the Terek river. The Khanate of Astrakhan, and the Cherkassian and Kabardinian princes, become vassals of the Russian Empire

1558 Beginning of the Livonian war against the Baltic peoples, which would continue for 25 years and end unsuccessfully for Russia

1559 Daniil Adashev's campaign against the Khanate of the Crimea, a vassal state of the Ottoman Empire

1560 First mention of the Volga Cossacks, who had migrated to the Volga basin from that of the River Don

1569 The weakened Grand Duchy of Lithuania forms a formal union with Poland

1571 The Tatar army of Khan Delvet Gerey of the Crimea burn Moscow and take many captives. Appearance of the first Russian military manual. The Cossacks are subdivided into urban or regimental, and border patrol formations – *stanitsa (stanichnie kazaki)*

1576 Don Cossacks capture Azov on the northern shore of the Black Sea, but are soon defeated by the Ottoman Turks who regain control

1577 Volga Cossacks are routed by Tsarist troops, after which they are reformed into two hosts/armies: the Siberian, and Yaik (or Ural) Cossacks. The Terek Cossack host is also formed in this year

1579 Don Cossacks participate in the Livonian war against the Baltic peoples as part of the Russian army, but return home without permission

1581–82 Polish troops under King Stephan Bathory besiege the Russian city of Pskov

1581 Yermak Timofeevich leads a force of 500 Cossacks across the Ural mountains and begins the Russian invasion of western Siberia

1582–84 Timofeevich, now leading 900 Cossacks, defeats Khan Kuchum and captures Isker, capital of the Khanate of Sibir (Siberia)

1590–93 Russian-Swedish war; Russian forces under Boris Godunov conquer Ivangorod, Koporie and Iam

1598 Final defeat of Khan Kuchum of Sibir

1598–1605 Reign of the 'elected' Tsar, Boris Godunov

1601–03 'Years of starvation' in Russia

1602–06 Emergence and reign of Tsar Ljedmitri I, known as the 'False Dmitri'

1605 Battle of Dobrinichi

1606–07 Rebellion of Ivan Bolotnikov

1607–15 War against Poland, Sweden and Denmark

1608–09 Russian defence of monastery of Troitse-Sergiev

1609–11 Russian defence of Smolensk

1612 Emergency volunteer corps under Kuzma Minin and Dmitri Pojarski retake Moscow from the Poles

1612–13 Cossack forces support Tsarist armies against invading Poles

1612–20, 1624 Cossack naval raids against Black Sea coasts of Ottoman Turkish Empire

1614 New tax – '*streletski* bread' – imposed, to pay for troops' wages, and becomes one of the most significant taxes in the Russian Empire

1613–45: Reign of Tsar Mikhail Fedorovich

1615 Russian defence of Pskov against Swedish army of King Gustavus Adolphus

1618 21,000 Ukrainian ('Little Russian') troops and Zaporozhian Cossacks led by *hetman* Sahaydachny march against Moscow, but are defeated

1620 First Russian military textbook, *The Regulations of Infantry, Gunnery and Other Military Science* by A.M.Radishevski, is written in manuscript

1631–32 The regular troops are reorganized into 12 regiments, and the first four regiments are based upon Western European patterns

1632–34 The Smolensk war

1637–41 Force of 500 Don Cossacks again retake Azov from the Ottoman Turks, then offer it to the Russian government; but under threat of war with the Ottoman Empire, Azov is abandoned

1645–76: Reign of Tsar Aleksey Mikhailovich 'the Timid', father of Peter the Great

1647 Publication of first printed Russian military manual, *The Study and Ingenuity of Infantry Warfare*

1648 Don Cossacks defeat Tatars outside the Cherkassk settlement

1648–54 War to unite the Ukraine with Muscovite Russia

1651–67 War with Poland

1656–58 War with Sweden

1670–71 Rebellion of Stepan Razin

1677–78 First and second Russian advances to besiege Chigirin

1687–89 First and second Russian invasions of the Crimea

1689 Assumption of personal power by Tsar Peter I the Great

1695–96 First and second Russian campaigns against Azov

1697 Cossacks conquer Kamchatka peninsula on the Pacific coast of Siberia

1698 *Streltsi* rebellion

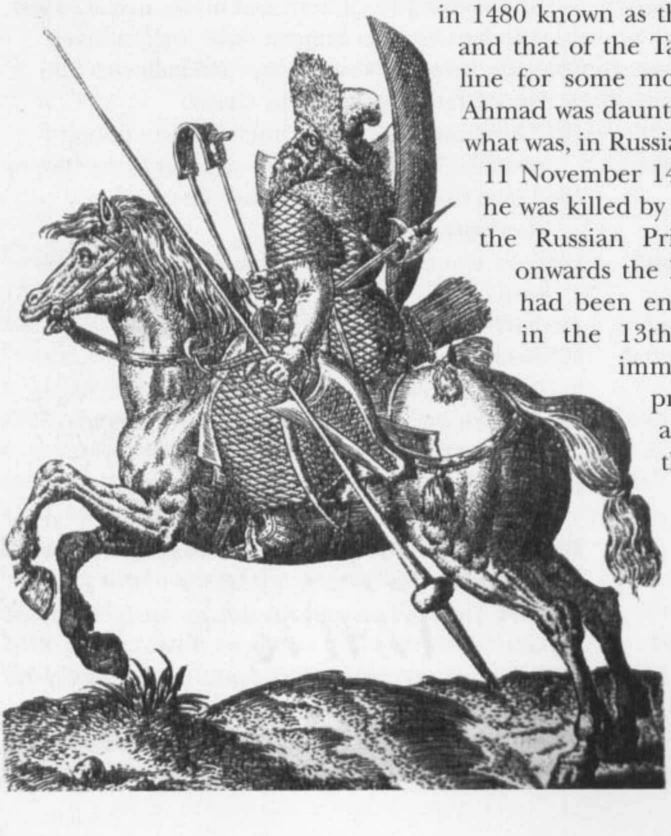
1699 *Streltsi* regiments in Russia are disbanded

THE LATE 15th-CENTURY ARMY

Faced with threats from all sides at the end of the 15th century, the Muscovite state clearly needed a larger army. This required a broader base of recruitment than had existed in earlier periods, and contemporary chronicles indicate that the social origins of Russian warriors were now more varied than in the previous century. In these new campaigns the *Veliki Knez* or Grand Prince of Muscovy took men from both the *druzhinas* – the military followings of the *boyar* noblemen – and from their military slaves, who had some features in common with the better known *mamluks* of the Islamic world. The Grand Princes also called upon the *boyar* aristocrats themselves; upon the *'boyars'* sons', who were a lower category of military noblemen, and upon urban militias. There is even some evidence that regiments of peasants were sometimes recruited. In each case the same basis of calculation was used: every four 'wooden ploughs' or peasant families provided one rider and his horse. Every ten 'wooden ploughs' were evidently expected to equip one heavy cavalryman with armour and weapons.

Such a gathering was militarily less efficient than the army with which Prince Dmitri Donskoy defeated the Mongol-Tatars in 1380, but when armed with handguns and artillery it was still a formidable force. It certainly proved effective against the cavalry of the neighbouring Mongol-Tatar Hordes and Khanates, still armed only with bows, spears and sabres. According to Russian sources of the time this Russian army numbered as many as 180,000 men, and many scholars regard this as a realistic figure.

Russian cavalryman in quilted armour, in a 16th-century German engraving. He is shown armed with a lance, bow, sabre and battleaxe and carrying a shield; note also the heavy flail-like whip, incorporating wooden rods.



Russian superiority in firearms played a key role in the confrontation in 1480 known as the 'Stand at the Ugra river'. A Russian army and that of the Tatar Khan Ahmad remained static along this line for some months, watching each other. Evidently Khan Ahmad was daunted by the strength of the opposing force and what was, in Russian terms, their modern armament. Finally, on 11 November 1480, the khan retreated. Not long afterwards he was killed by a rival, Khan Ivak, who sent Ahmad's head to the Russian Prince Ivan Vasilievich. From that moment onwards the Russian state was free of the Tatar yoke that had been endured since the Mongol invasions of Russia in the 13th century. Furthermore, Muscovite Russia immediately began to increase in size; her predatory new ruler adopted a new coat-of-arms – in 1497 the seal of Tsar Ivan III featured the image of a two-headed eagle. This not only proclaimed his power within Russia, but symbolized his claim to the lost throne of the Byzantine Empire, Tsar Ivan having married the niece of the last Byzantine Emperor Constantine XI. Combined in his arms with this two-headed imperial eagle were the sword of independence and absolute power, the Orthodox cross of Russian Christianity, and St George and the Dragon, which was the badge of Moscow.

THE ARMY OF IVAN THE TERRIBLE

The *streltsi*

The troops of Ivan IV, with their muskets and cannon, were also the first regularly paid and professionally structured army in Russian history. The wars and diplomacy of Ivan III had made Muscovy one of the most powerful states in Europe in the late 15th and early 16th century, but serious internal and external problems remained. One of the most pressing was a threat from the east and south by Tatar raiders, while the regional independence of the great feudal lords or *boyars* also undermined the power of the Grand Prince. During several years when Russia was effectively ruled and plundered by the *boyars*, the young Ivan IV survived a perilous and abused childhood; but when the teenager finally took the throne, instead of being satisfied with the title of Grand Prince he declared himself 'Great Tsar of the whole Rus' (1547). This was not only to increase his royal dignity, but also a warning to everyone around him that he intended to rule as an autocrat.

Tsar Ivan IV decided to solve his two most pressing problems simultaneously. His most immediate external enemy was the Khanate of Kazan. On six previous occasions (1439, 1445, 1505, 1521, 1523 and 1536) Kazan had attacked Moscow, while Russian troops had invaded Kazan seven times (1467, 1478, 1487, 1530, 1545, and in Ivan IV's reign in 1549 and 1550). Tsar Ivan now ordered the construction of Svijajsk, a fortress town and military depot on the frontier with Kazan, to serve as a base for future expeditions against the middle reaches of the Volga river. The Russian invasions of 1549 and 1550 had failed, but Ivan was

Detail from a painting of the battle of Orsha (1514), made shortly after the event; it shows three Russian cavalrymen pursued by Polish hussars. During this campaign Muscovy retook the city of Smolensk after a century of Lithuanian occupation. (National Museum, Warsaw)





Siege of Kazan by Ivan the Terrible, in *The Russian Illuminated Chronicles*, 16th century. Note the combination of cavalry, archers, handgunners and artillery represented here, from background to foreground. (Shumilov Volume, VI, f.882r, Saltykov-Shchedrin Public Library, St Petersburg)

determined to destroy the Khanate of Kazan, and in 1552 he succeeded.

Initially some irregular infantry with firearms were organized into permanent detachments. In the words of the chronicle: 'In 1550 the Tsar created the elective [selected] *streltsi* with *pishals* [arquebuses or muskets] in three thousands, and ordered them to live at the Vorobieva *sloboda* [Sparrow settlement].' In return for their duties these *streltsi* received uniforms consisting of a traditional Russian *kaftan* coat reaching the ankles, a conical *kolpak* or fur-trimmed *shapka* cap, and top boots. They were equipped with a matchlock musket and a sabre; a *bardiche* or long-hafted axe with a crescent-shaped blade was also used as a musket rest, and the men were issued gunpowder and the lead to make themselves bullets. Their pay ranged from 4 to 7 roubles a year for a private *strelets,* and 12 to 20 for a *sotnik* or commander of one hundred, to 30 to 60 roubles for a *streletski golova* – 'head' or regimental commander. While privates also received more than 2,000lb of oats, rye, bread and meat (mutton) per year, the senior ranks were endowed with land grants of between 800 and 1,350 acres.

This was very high payment for that time, and was comparable to that given to aristocratic cavalry; for example, the *Boyars Book* of 1556 shows the payments for such horsemen ranging from 6 to 50 roubles. On the other hand, the noble cavalry were paid lump sums for six or seven years at a time, which enabled them to purchase military equipment but was not intended as an everyday income. Instead they relied upon the revenues of their lands, while their peasants also accompanied their masters as simply armed warriors. It was an essentially feudal system, in which landlords with larger estates were expected to bring more cavalrymen on campaign.

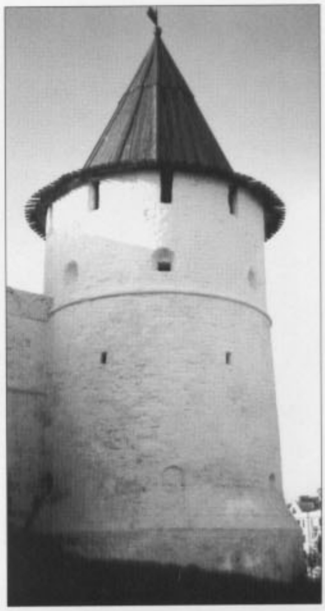
During peacetime such landowners lived in their villages, but were expected to be ready for military service when required. In practice, it was difficult for the Tsar to assemble large forces in this way, which was why full-time, paid and immediately available *streltsi* regiments were so valuable. Their numbers began to increase rapidly from an initial 3,000 to 7,000 (of whom 2,000 were mounted infantry), under the command of eight 'heads' and 41 *sotniks.* By the end of Ivan the Terrible's reign they numbered 12,000, and by the coronation of his son Fedor Ivanovich in 1584 this standing army had reached a strength of 20,000. At first control of the *streltsi* was the responsibility of the *Streletskaya Izsba* or 'musketeers' house', which was soon renamed a *prikaz* or 'order'. This was very roughly comparable to a modern government ministry, and is first mentioned in 1571.

In many respects, the *streltsi* forces of 16th- and 17th-century Russia had something in common with the famous janissary infantry of the

Ottoman Empire, and may indeed have been partly inspired by them. Each regiment was differentiated by the colours of its uniform dress, and was usually known by the name of its commander. Each regiment also bore a number, the lowest number indicating the highest prestige; a unit could be rewarded by being re-allocated a lower regimental number. In Moscow itself the First Regiment was the *stremiannoy prikaz* or 'stirrup regiment', because it served 'near the Tsar's stirrup' (such terminology reflecting the deep-seated influence of Eastern military traditions). It formed one of the Tsar's bodyguard units, enjoyed various privileges and, like the Second to Fifth regiments, consisted of elite mounted infantry. Some other Russian towns also had *streltsi* regiments, but those of Moscow ranked highest.

One of the closest observers of these troops was the English ambassador Fletcher, sent to Moscow by Queen Elizabeth I. In 1588 he wrote that the *strelets* or unmounted infantryman was armed with a handgun, a *bardiche* axe on his back and a sword at his side. The gun's stock was 'not the same as on a musket and resembled that of a hunting gun, the finish of the barrel being very rough work; despite its great weight it shot a small bullet'. Another observer, named Parre, described the Tsar's appearance in 1599, accompanied by 500 guards dressed in red *kaftans* and armed with bows and arrows, sabres and axes. However, it is unclear just who these troops were: *streltsi*, *'boyars'* sons', junior noblemen, or perhaps *stolniki* or *jiltsi* – provincial nobility who occasionally lived in Moscow as a Tsarist praetorian elite.

Although they were uniformly dressed, the *streltsi* lived in their own houses with gardens and kitchens, supplementing the military wages they received from the Tsar by also working as craftsmen and even merchants – once again, the similarity with later Ottoman janissaries is striking. These arrangements did not prevent the *streltsi* from becoming increasingly effective infantry, however. During the storming of Kazan (1552) they were in the first waves of attackers, and their shooting had a major impact on the operation. Chronicles of that time claim that they were so skilful with their *pishals* that they could kill birds on the wing. In 1557 one Western traveller recorded how 500 marksmen, divided into hundreds and fifties, marched with their commanders through the streets of Moscow to the shooting range, where their target was an ice wall. The *streltsi* began shooting from 60 yards' range, and continued until this wall was completely destroyed.



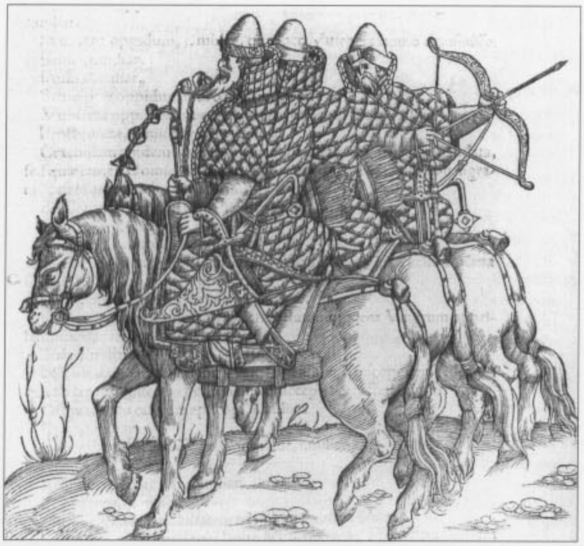
Round Tower of the Kazan Kremlin, built to replace a wooden tower after the conquest in 1552. (Photo V. Shpakovsky)

The *oprichniki*

The most trusted of Ivan IV's bodyguard units were the *oprichniki* of his *oprichnina* (in the earliest days sometimes called *cromeshnina*), so named from the fact that they were 'selected'. An *oprichnina* was a territory or estate that the Tsar chose to take under his personal management; this contrasted with lands left under the administrative control of the aristocratic *Boyar Duma* (roughly comparable to a House of Lords), which were called *zemshina*. Russian historians use the word *oprichnina* in two ways: in its narrow meaning it designates the sovereign's thousand-strong court in 1565–72, among whom he lived

Helmets excavated in the Moscow Kremlin, believed to date from during or shortly before the reign of Ivan the Terrible. (Moscow State Historical Museum Conservation Department; photo D.Nicolle)





'Russian cavalrymen', from Sigismund von Herberstein's *Rerum Moscovitcarum*, published in 1556. See Plate B3.



***Kaftan* coat worn by one of Ivan the Terrible's elite *oprichnina* corps. (State Historical Museum, Moscow)**

and through which he ruled, to the exclusion of any contact with the wider class of *boyars*; but it is used more broadly to refer to the entire state machinery during this same period, and by extension, to the troops directly answerable to the Tsar. The richest lands in Russia became *oprichnina*, thus providing the Tsar with plentiful revenues. In Moscow certain streets became part of the Tsar's *oprichnina*, and outside the Moscow Kremlin the Oprichniy Palace was built – now occupied by the old buildings of Moscow University. In order to enter the *oprichniki* guards, a *boyar* or other nobleman had to undergo a special review, to weed out any who aroused the Tsar's suspicions. Once enlisted, the man then swore a special oath of loyalty to the Tsar.

An *oprichnik* was easily recognizable: he wore a coarse monastic-style *kaftan*, lined with sheepskin and with a waist sash – but under this his tunic was made of embroidered cloth-of-gold or satin, lined with sable or marten fur. The *oprichniki* also hung a severed wolf's head from their horses' necks or the side of their saddles; and on the handles of their whips was a bundle of wool, sometimes replaced by a broom – these symbolized that the *oprichniki* fell upon the Tsar's enemies like wolves, and then swept into oblivion everything unnecessary.

At Alexandrovskaya Sloboda, where the Tsar had transferred his residence (now the town of Alexandrov in the district of Vladimir), the *oprichniy* court was given the appearance of a monastic order, with the Tsar playing the role of a father-superior. In fact the *oprichniki* were called a fraternity; but this ostensible humility did not mask their enthusiasm for unchecked robbery, lethal violence and unbridled orgies. Meanwhile the sadistic Tsar personally smothered or poisoned his enemies, or cooked them alive during visits to the torture chambers – which were interspersed with furious bouts of prayer during which he passionately repented of his sins. His increasing derangement was well attested by many witnesses, and extended to the beating to death in November 1580 of his much-loved son Ivan when in the grip of one of his ungovernable rages. Another reason for Ivan's choosing to lose himself in his hideous pleasures was probably frustration at the failure of his campaigns. After the victories over Kazan in 1552, Astrakhan in 1556, and some initial successes in the Livonian war against the Teutonic Knights on the Baltic coast, the Tsar's military fortunes had faded. In 1571 the Tatar Khan even set fire to Moscow, after which the chief leaders of the *oprichniki* were killed.

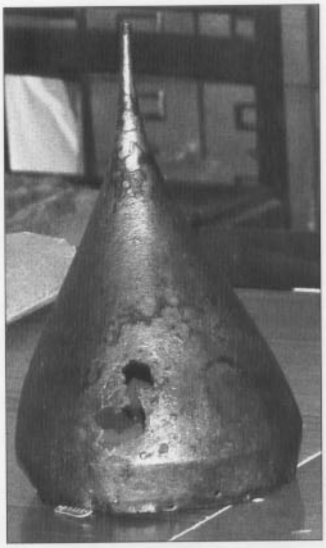
Aristocratic cavalry

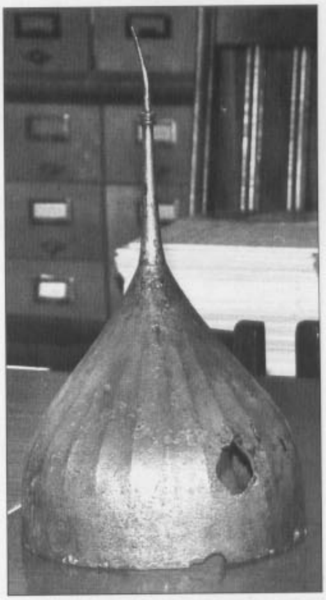
The main strength of the Russian army during this period remained the cavalry drawn from the noble landowning class. Their incomes differed with their holdings, so each rider dressed as he could afford, though the government demanded uniformity in their armament: every cavalryman should have a sabre, a helmet and mail armour. In addition to a conventional mail shirt the cavalryman might wear a *tyagilyay*, a thickly quilted *kaftan* lined with mail and metal scales or lamellae. Those who could afford it were also armed with an arquebus or carbine with a smooth or rifled barrel. Poorer riders usually had a pair of pistols, though the government urged men to acquire carbines for longer range shooting. As such weapons took a long time to load and often misfired, cavalrymen generally had a bow and arrows in addition. The main close combat weapon was an ordinary lance or a *sovnya,* which was a pole-arm with a curved knife-like blade.

In addition, most riders carried sabres of Turkish or Polish-Hungarian style copied by Russian swordsmiths; Oriental sabres with strongly curving blades of damascene steel had broad back edges. The straight-bladed *palash* was also popular, and in richly decorated form was associated with the noblest warriors; its blade resembled that of a European broadsword but was narrower than the swords of medieval times. Another form was the *suleba,* which had a broad but only slightly curved blade.

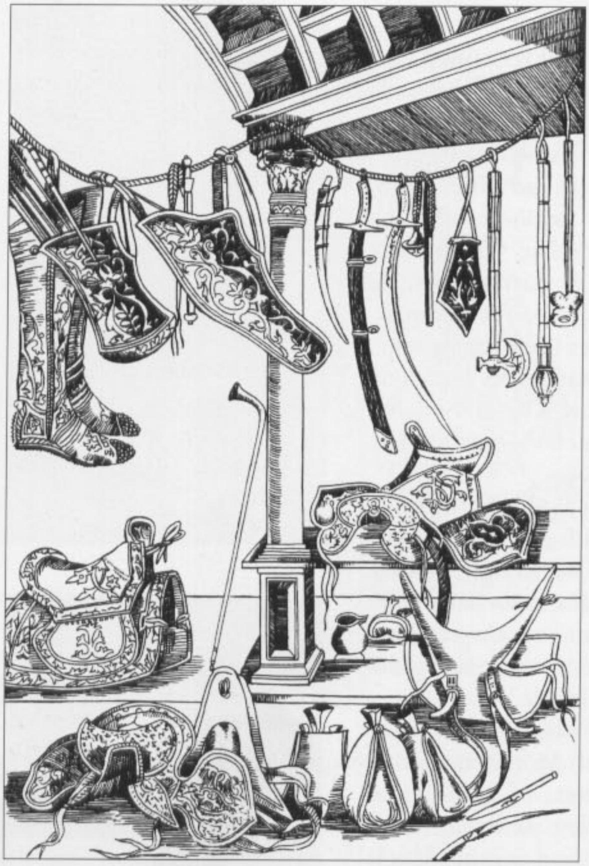
The weapons of Russian landed cavalry were notable for their decoration. The scabbards of sabres were covered with Morocco leather inset with precious and semi-precious stones, the butts of arquebuses were encrusted with mother-of-pearl and ivory inlay, while armour, helmets and *naruchi* arm defences were engraved and inlaid. Much weaponry was brought from the East, and included Turkish and Persian damascus steel sabres and daggers, Egyptian *misurki* helmets, shields, saddles, stirrups and embroidered horse bardings. Firearms, swords and saddles were also brought from Western Europe. Such equipment was very expensive: for example, the complete armour of a 16th century cavalryman reportedly cost 4 roubles and 50 kopeks, plus a helmet costing one rouble and a sabre costing 3 to 4 roubles. For comparison, in 1557–58 half a small village cost just 12 roubles. In 1569–70, when Russia suffered a terrible famine, 5 to 6 *puds* of rye (176lb to 211lb) reached the incredible price of one rouble.

Cavalry and infantry who had *pishals* were each ordered by the Tsar to have 12 *grivenki* (13lb) of gunpowder and the same weight of lead for bullets. The term *pishal* was used more or less generically for early firearms, including large wall pieces and cannon. Firearms were differentiated between the *pishal zatinnaya* – the biggest calibre wall pieces; the *pishal rychnitsa* handgun, the standard weapon of *streltsi* (often called a musket in Western sources); and the *pishal zavesnaya,* which was the same but with a leather sling, to be carried at the man's back. The *pishal* was, in fact, the common weapon of townsfolk and other 'black' or lower class persons, whom the nobles regarded as a rabble. In 1546, at Kolomna, there had been a serious clash between men on foot armed with *pishals* and aristocratic horsemen, and the outcome had encouraged the future Tsar Ivan's military reforms. But even after the *streltsi* became 'people of the Tsar' like the noble cavalry, the aristocracts rarely used firearms themselves, instead purchasing such weapons for their servants.





Another pair of helmets, with extended 'spires' and one with a fluted skull, excavated in the Moscow Kremlin and believed to date from the mid to late 16th century. (Moscow State Historical Museum Conservation Department; photo D.Nicolle)



'Arms and Equipment of the Muscovites', in Sigismund von Herberstein's ***Rerum Moscoviter wunderbare Historien,*** published in 1567.

Horses

Despite these strange contradictions, the 16th century was nevertheless the golden age of Russian noble cavalry, a fact which would have been impossible without improvements in horse breeding. The most widespread breed in the 16th century was the Nogai, a small, tough steppe breed of up to 14½ hands (58in), descended from the horses of the Asiatic steppes, and inheriting their ability to travel long distances on poor rations. Each embassy sent by the Nogai Tatars brought 40,000–50,000 horses, from which the Tsar's grooms selected the best, after which other people could also buy them. Stallions of this breed normally cost 8 roubles, a filly 6 and a foal 3 roubles. The 'Russian breed' horse was a gelding, the *bahmats* a small but tough horse used by peasants. At the other end of the scale were the *argamaks,* including thoroughbred Arabian horses found only in the stables of the Tsar or the *boyars* and costing a phenomenal 50 to 200 roubles.

The pommel of the typical 16th century Russian saddle sloped forwards while the cantle sloped back, which helped the rider turn around to use his bow or sabre effectively. This indicated that the lance was not at that time the main cavalry weapon, since it needed a different form of saddle for a more secure seat. Muscovite horsemen rode with bent legs in shortened stirrups. It is also interesting to note that the upper classes' passion for horses reflected continuing Asiatic cultural influence. Russian noblemen spent great sums on horses and harness, often using the breed of their horse to advertise their own high status, and maintaining horses which were never even ridden. Fashions in horse furniture spread rapidly; for example, the *nagaika* – a heavy lash or quirt named after the Nogai Tatars – took different male and female forms, and is still used by Russian Cossacks today.

The field organization of the Russian army was the same as it had been in the 15th century. Troops were divided into large formations on the left and right wings, plus vanguard and advance guard units. These were battlefield formations of cavalry and infantry rather than the fixed regiments of more recent times. On the march the army was commanded by a senior *voyevoda,* while others headed each regiment. Military flags, including that of each *voyevoda,* played a major role, as did military music. Russian armies used huge copper kettledrums carried between four horses, as well as Turkish *tylymbases* or small kettledrums attached to a rider's saddle, and other riders carried trumpets and reed pipes.

16th-century artillery

During the reign of Ivan IV the role of Muscovite artillery, organized under the *Pushkarskaya Izba* ('gunnery house'), increased significantly. In 1547 the gunners – who lived separately from other troops but were



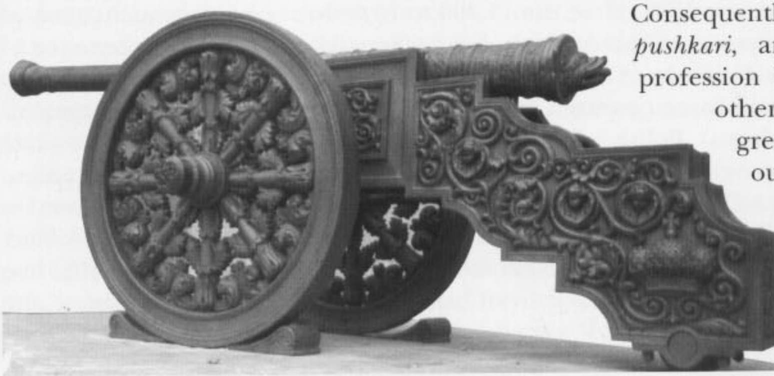
The *'Tsar-Pushka'*, a gigantic 16th-century bronze bombard cast by Andrey Chokhov, which came to symbolize the power of Russia's artillery. The carriage is a 19th-century addition. (Kremlin, Moscow; photo V.Shpakovsky)

nevertheless part of the *streltsi* – became an independent formation called the *nariad*. In 1581 a special *prikaz* or regiment of *pushkarski* (from *pushka*, 'gun') was formed. In 1558 ambassador Fletcher had written: 'No one sovereign of Christendom has so many guns as them, which is proved by their great number in the Palace Armoury in the Kremlin... all cast from bronze and extremely beautiful.' The campaign dress of gunners varied but was similar to Russian folk costume and to the *kaftans* of the *streltsi;* however, the artillery *kaftan* was shorter, being called a *chuga kaftan*. At first artillerymen also used traditional mail armour, helmets and vambraces. Their winter uniform was a Russian folk *polushubok* or sheepskin coat.

At this period Russia had many talented gun-founders, such as Stepan Petrov, Bogdan Piatoy, Pronia Fedorov and Kashpir Gunysov. Kashpir's pupil Andrey Chokhov became the best known of them all; he cast his first gun in 1568, his second and third in 1569, and all were sent to strengthen the defences of Smolensk. Chokhov's first known large calibre siege gun was cast in 1575, and was again sent to Smolensk. Today 12 of his guns are still preserved (he made over 20), seven in the State Museum of Artillery in St Petersburg, three in the Moscow Kremlin, and two in Sweden since being captured during the Livonian war. Each of Chokov's guns was named, including the Vixen (1575), the Wolf (1576), the Persian (1586), the Lion (1590), and King Achilles (1617). In 1586 he produced a huge gun, decorated with the figure of Tzar Fedor Ivanovich riding a horse, which came to be known as the *'Tsar-pushka'* and which now stands in the Moscow Kremlin. Nevertheless, the widespread idea that Russia concentrated on the production of large guns during the 16th century is incorrect. Many different types of gun were cast at that time, to be used by field armies and in timber fortresses along Russia's extensive frontiers.

Russian 16th-century cannon, mounted on a later carriage. The term *pishal* was used for both artillery pieces and handguns. (State Artillery Museum, St Petersburg; photo V.Shpakovsky)

Their special skills made the *pushkari* or gunners men of high value, who received large wages in cash, bread and salt. On the other hand, their role was not considered very honourable, since it required considerable experience without any guarantee of success. Consequently the *streltsi* often refused to serve as *pushkari*, and this branch of the military profession became more hereditary than the others. Such gunners frequently showed great devotion to duty. For example, outside Venden on 21 October 1578 during the Livonian war, the Russian artillerymen, unable to bring their guns safely off the battlefield, actually hanged themselves on ropes attached to the barrels.



THE 17th CENTURY: NEW THREATS, NEW HORIZONS

The reign of Ivan IV the Terrible had weakened Russia. Many peasants had migrated to the south, north, and into Siberia, which had first been opened up by Yermak and his Cossacks from 1582. The death of Yermak did not stop this tide of conquest and colonization, and increasing numbers of people from central Russia moved eastward. In 1591 Prince Dmitri, the young son of Ivan IV who lived at Uglich with his mother, was killed under mysterious circumstances. That same year a defensive victory saved Moscow from the Tatar leader Kazi-Girey, who had taken advantage of Russia's war with Sweden to advance on the capital. Following the death in 1598 of Tsar Fedor, Ivan's eldest surviving son, Russia had its first elected Tsar, Boris Godunov, during whose reign Russian armies attacked Swedish possessions in Finland and other Baltic territories.

Mobile field fortifications made of linked wooden mantlets, *guliay-gorod,* played a major role in the victory over Kazi-Girey's horde, but by the end of the 16th century they were considered too old-fashioned to be effective against more up-to-date enemies than the Tatars. Long wooden walls were assembled from mantlets perhaps 4ft high by 6ft wide, temporarily linked together with hooks or chains; each shield had a gun port, and protected the gunners or musketeers behind from enemy arrows. They could be unfastened and opened to allow the defenders to launch counter-attacks, and closed again to provide a strong refuge into which to retreat. In winter they were placed on sledge runners, in summer on wheels. During the battle outside Moscow in 1591 the *guliay-gorod* walls measured about 1¼ miles by 1,000 yards.

The 'False Dmitris'

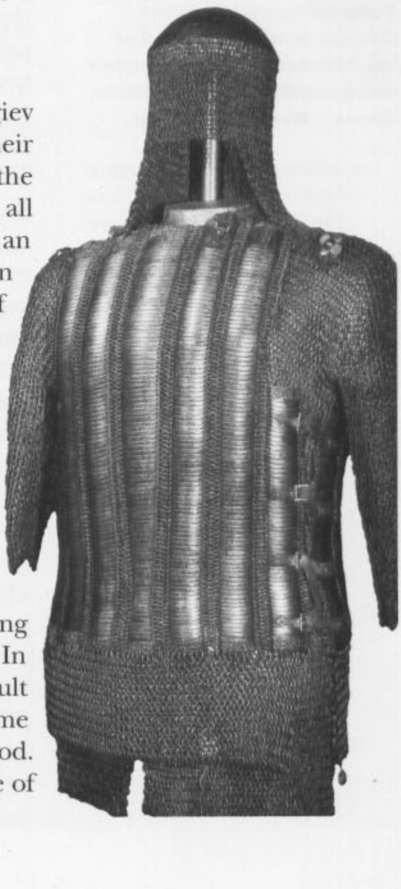
Russia's so-called 'Times of Trouble' began after crop failures in 1601–03 caused terrible starvation and consequent anarchy. An impostor also appeared, claiming to be the 'rescued' Prince Dmitri – a name which Russians believed indicated a good Tsar who would bring them freedom. 'False Dmitri I' was followed by 'False Dmitri II' (Ljedmitri I and Ljedmitri II), resulting in prolonged civil wars, foreign interventions and uprisings, the worst of which was led by Ivan Bolotnikov. Ljedmitri I was also supported by Poland, and his army included many volunteers from the Polish aristocracy as well as Cossacks.

The most significant battle took place outside Dobrinichi on 21 January 1601. Here the 15,000 to 20,000-strong government army of the *Voyevoda* Mstislavski included 5,000 to 6,000 *streltsi* and a *nariad* of 14 guns. The army of the Impostor had 13,000 to 15,000 men with 13 guns; its main force consisted of seven Polish cavalry *khorugvs* ('banners' or squadrons), Polish infantry, and 1,000 to 2,000 Russians who wore white shirts over their armour to distinguish themselves from the government troops. During the night before the battle the Impostor's troops tried to burn the village of Dobrinichi where the Russian army was assembled, but this attempt failed. Next morning the Russians formed a battle line outside the village, their front being barricaded by sledges loaded with hay with the artillery placed between them, while the cavalry took up position on both flanks.

The Impostor's cavalry consisted of two lines, with seven Polish squadrons in the first and eight squadrons of Russians in the second. These advanced against the right flank of the government army, where Mstislavski's cavalry moved to counter-attack. Western mercenaries in his pay advanced prematurely, were defeated and began to retreat. The Poles sensibly did not pursue these beaten horsemen, but turned against the right wing of the Russian infantry line, which was protected by sledges. Eyewitnesses reported that the *streltsi* fired a volley when the Polish cavalry were still far from their line, but followed this with a second which completely broke their enemies' ranks. Many cavalrymen fled in terror, after which the other rebel forces began to retreat. The government cavalry pursued them, and captured all the enemy guns. This victory was of only limited tactical importance, but it did indicate the effectiveness of musket-armed infantry drawn up in lines. Thereafter Russian *streltsi* and Cossacks started practising shooting from pits dug in the ground, from trenches, from behind moats, and from specially excavated 'burrows' from which they fired at the back of enemy troops who had crossed their field fortifications.

After the assassination of the first 'False Dmitri' and the appearance of the second, large parts of Russia were occupied by Polish and Swedish troops, while others fell under the control of rebel Cossacks and bandits. Consequently the rebel forces of Ivan Bolotnikov could besiege Moscow itself. During this period government gunners reportedly used incendiary cannonballs, which were impossible to extinguish, against the rebel 'peasant army'. Only the combined efforts of many Russians, including the 'folk volunteers' of the Nizhegorodski emergency corps, eventually saved Moscow and drove out the invading foreign armies.

Mail-and-plate cuirass and coif of Tsar Mikhail Fedorovich, 1620. (Kremlin Armoury Museum, Moscow)



Polish and Swedish sieges

It was during this war that Polish troops besieged the Troitse-Sergiev monastery in 1608–09 (see 'Fortification' below). They and their Cossack allies numbered 12,000 men with 63 guns. However, the monastery had a solid stone wall nearly 20ft thick and 12 towers, all pierced with gun ports on several levels. These were protected by an artillery *nariad* with 90 cannon and heavy *pishals*, and had nearly ten tons of gunpowder in the magazines. The garrison consisted of around 2,500 warriors and monks, the latter also taking part in the defence. Six weeks of enemy bombardment failed to breach the walls, and attempts to shatter them with mines were also defeated by the defenders' counter-attacks. According to contemporary accounts, the defenders fought back not only with artillery and handgun fire, but also by hurling stones, pouring boiling oil and excrement, and throwing sulphur and lime into the attackers' eyes. Despite a siege lasting 16 months, the massive monastery fortifications survive to this day.

The Poles' siege of Smolensk in 1609–11 was more successful, being supported by heavy siege guns and reinforcements from Poland itself. In 1612, however, Moscow was retaken from the Poles. During this difficult period Swedish forces, which had at first helped the Russians, seized some northern towns including Novgorod, Oreshek, Iam and Ivangorod. Hearing news that the Poles had been defeated at Moscow, the people of Tikhvin, Gdov and Porchov rose and regained their freedom.



Helmet of Tsar Mikhail Fedorovich, made by Nikita Davydov in the second half of the 16th century but remodelled and decorated in 1621. (Kremlin Armoury Museum, Moscow)

This provoked King Gustavus Adolphus of Sweden to attack Pskov, a strongpoint barring his route to Novgorod. He had 13 squadrons of cavalry (2,061 *reitars*), 40 companies of infantry (6,411 soldiers) and 200 artillerymen. Pskov had a garrison of 4,220, plus the townspeople, whose morale was reported to be very high. There were three attacks upon the fortress; despite some local successes the Swedes failed to take the town, eventually withdrawing upon the approach of winter after suffering heavy losses. This defeat taught Gustavus Adolphus hard but valuable lessons, and was instrumental in his famous reforms of the Swedish army. Among these lessons was the effectiveness of new infantry firearms tactics when compared with the aristocratic cavalry. These campaigns also taught the Russian rulers that their forces needed modern organization and modern equipment.

17th-CENTURY MILITARY ORGANIZATION

Recruitment and structure

In order to retake Smolensk, the new Tsar Mikhail Fedorovich Romanov decided to raise two regiments of 'soldiers' in 1630. The term 'soldier' reached Russia from Italy and Germany, and originally meant 'one who receives wages'; it is used throughout this text in its specific Russian sense of full-time troops paid wages as distinct from other forms of military service. The pay for soldiers in these new regiments was 5 roubles per year, plus a daily allowance for food. The contingents themselves were very mixed, including noblemen who had lost their lands, junior *'boyars'* sons', Cossacks and free men (the impoverished gentry were preferred, but there were only 60 of them). These new regiments also had a new system of organization: each infantry regiment consisted of eight 'companies' (rather than *sotni*) of privates, each with 120 musketeers and 80 pikemen. The regimental staff numbered 176: a *polkovnik* (colonel), a regimental 'big' *poruchik* (lieutenant colonel), a major, *kapitans* (captains), 'small' *poruchiks* (junior company officers), a quartermaster, a doctor, sergeants, corporals, drummers, a scribe, and interpreters (some of the staff were foreigners).

Military training was supervised by foreign colonels hired for their considerable military experience. According to the instructions of 1651, on the march each company was led by its captain with the *poruchnik* marching behind the company. A *praporshik* went ahead of the pikemen, with the sergeants on both sides; senior corporals were on the right side, with drummers between the third and fourth ranks of musketeers. Around this time, new Muscovite laws regulated relations between Russians and Western Europeans living in the country, whose numbers steadily increased even during the low point in Russia's military fortunes.

In 1632 another four regiments were established on the same pattern, all of them taking part in the Smolensk war. That year also saw the formation of the first regiment of *reitars* – new-style cavalry recruited from free men, '*boyars'* sons' and other poorer classes of the nobility. Monasteries and noble families 'out of service' were ordered to produce one *reitar* for each 100 square yards of their land, which was the traditional Russian system of recruitment. A regiment of *reitars* consisted of 12 companies, each of 167 men. During the Smolensk war two further regiments were raised, along with a regiment of dragoons consisting of 12 companies each of 120 men, plus a *nariad* of 12 light cannon. By the end of this campaign the Russian government had organized ten new-style regiments totalling 17,000 soldiers, but after the war ended all were disbanded.

The problem of garrisoning the lines of defensive strongpoints along the southern frontier against Tatar raids similarly resulted in the creation of dragoon and infantry regiments – 8,000 men in total. These were drawn not only from free men but also from peasant serfs, the latter recruited by a 'new/old' system of requiring one footsoldier from a specified number of 'wooden plough' units of land. These were not the old peasant volunteer corps, who had been disbanded back to their homesteads after the war ended, but were real soldiers who received wages to pay for their clothing, weaponry and food. Before long these dragoon and infantry frontier regiments numbered 13,000 men; yet from 1 November 1638 these too were disbanded. This time, however, they were recalled the following spring – and every subsequent spring – for military training. In 1649 regiments of free soldiers were created along the north-western frontier, but here the system was different, one conscript being required from each peasant homestead. The common soldiers in these new regiments were all Russians while the majority of their officers were foreigners, accompanied by Russian counterparts who were supposed to learn from them the new military arts.

The number of *streltsi* had reached 8,000 during the first half of the 17th century, but a edict of the Tsar then prohibited townsmen and peasants from entering this service; consequently, the *streltsi* became a closed caste who owed military service for life. Simultaneously their wages were reduced to only 3 roubles a year, while the bread allowance was also reduced. Even so, their numbers constantly grew, reaching 55,000 throughout Russia as a whole by 1681.

A military manual of 1649 ordered that one in every 18 young noblemen and *'boyars'* sons' should enter military service. A manual of 1678 ordered the enlistment as soldiers or *reitars* of those receiving

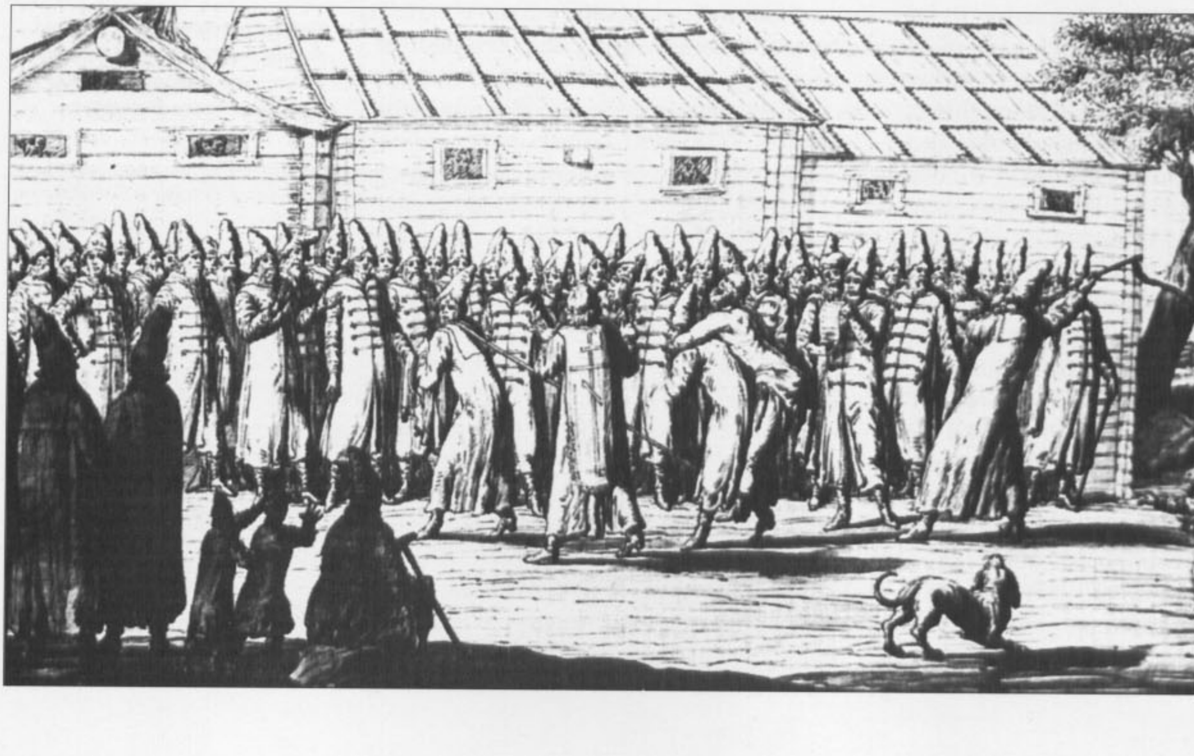


***Streltsi* prostrating themselves during the Tsar's Palm Sunday procession in Moscow, 1662; from the *Al'bom Meierberga*.**

welfare support, but not serfs. The government had, in 1649, opened up the ordinary infantry regiments to this latter category, at first in the north-western regions and eventually throughout the entire country; every 25 peasant homesteads provided one recruit – a total of 18,000 men. This was soon increased to one recruit from every 20 homesteads. Like the *streltsi*, these soldiers received weapons and ammunition, 3 roubles per year for clothing, and from 3½ to 5 kopeks per day for food. More importantly, the soldiers' families were exempted from taxation, while the soldier himself was freed from serfdom and could own his own land. As a result the number of recruits grew from 3,323 up to 59,203 between 1631 and 1681.

In 1662 two regiments of mounted lancers and one regiment of hussars were added to the Russian army. The number of Cossacks was similarly raised to some 20,000 by the 1650s. By 1681 Russia could field between 38 and 41 regular regiments, which garrisoned frontier towns and took part in campaigns. Meanwhile the *streltsi* played the role of militarized police – rather like the NKVD or KGB troops in Soviet Russia – being the government's chief instrument of force within the country.

The overall structure of the Russian army in the field was similarly reformed. Instead of being organized into 'large regiments' comprising 'regiments of the right and left wings', regiments were divided between a system of grades and territorial districts. Only the Tsar's own regiment consisted of men drawn from all parts of Russia and from all grades. Around this time special lists were drawn up of all those eligible for enlistment, according to their grades. In 1680 there were nine grades, totalling no less than 164,600 men, of whom 49 per cent were infantry and 51 per cent cavalry. Lists were subdivided according to quality or official status, numbers of regiments, numbers of men, and the percentage of the entire army that they represented:



***Streltsi* attending a public flogging, from a 17th-century engraving published by Palmquist in 1898. The impression of uniformity of dress is striking, and obviously deliberate. See Plate H3. (State Historical Museum, Moscow)**

Soldiers		
Number of regiments	–	41
Total number of men	–	61,288
Percentage of army	–	37.3
Moscow *streltsi*		
Number of regiments	–	21
Total number of men	–	20,048
Percentage of army	–	12.3
***Cherkasi* (Cossacks from Cherkassk region on Dnepr river)**		
Number of regiments	–	4
Total number of men	–	14,865
Percentage of army	–	9.3
In separate *sotni*		
Total number of men	–	16,097
Percentage of army	–	9.8
Moscow persons of rank		
Number of regiments	–	*not applicable*
Total number of men	–	11,830
Percentage of army	–	7.2
Mounted militia		
Number of regiments	–	*not applicable*
Total number of men	–	10,000
Percentage of army	–	6.1
Total of army		
Number of regiments	–	667
Total number of men	–	134,128



'Russian infantryman', drawn by a Swedish ambassador to Moscow c.1674 and published by Palmquist at the end of the 19th century. Note the handgun, *bardiche* axe/rest, belt of charge containers, and sabre with one quillon swept up into a guard. He seems to have a smouldering length of slowmatch wrapped around the fingers of his left hand. (State Historical Museum, Moscow)

There were an additional 50,000 horsemen of the *hetman* units which the army drew from the steppe lands of southern Russia and the Ukraine.

The entire regimental service was controlled by three *prikazi* or authorities: the *Ruzriadni* or 'grade' *prikaz*, the *Reitars prikaz*, and the *Inozemni* or 'foreigners' *prikaz*. Special wartime requirements were supervised by the *Streletski prikaz*, *Pushkarski prikaz* (artillery department), and the *prikaz* for 'weaponry and Cossacks'. Two different ranking systems for the *sotni* and the 'companies' continued to be used until 1680, when all the ranks in 'soldiers' and *streletski* regiments were restructured on the Western European pattern into 'new order' regiments of soldiers, *reitars* and hussars, although the old system of *sotni* was still used by the Cossack hosts.

At the beginning of the 17th century the number of individually recruited foreigners in Russian service was very small – about 700 hussars and 300 to 400 infantrymen. After 1630 their numbers increased, but foreigners proved to be unreliable on a number of occasions; for instance, in 1656, after Aleksey Mikhailovich's Riga campaign, some foreign commanders turned traitor. The first elite regiment of 'selected' soldiers was created, with an entirely Russian command staff, to solve this problem, and a second followed; these regiments were twice as large as ordinary regiments, with 2,000 rather than 1,000 soldiers. In 1671 Aleksey Mikhailovich ordered that these first two regiments be incorporated into the *Streletski prikaz*, indicating

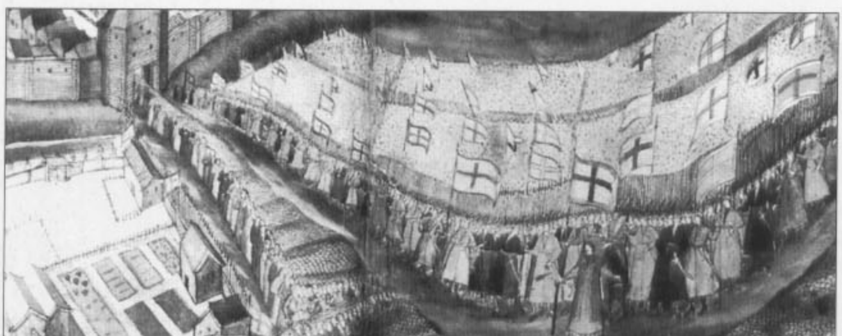
their high status. In 1680 these elite regular regiments – those of Shepelev and Krakov – were re-allocated to the *Inozemski prikaz* (and remained under its control until all the *prikazi* were abolished by Tsar Peter I the Great). At the end of the century the policy changed again; foreigners were barred from serving in the army, and in 1696 there were only 954 such officers, including generals – 231 in the cavalry and 723 in the infantry.

Uniforms of the 'coloured' regiments

During the 17th century many Westerners visited Russia and subsequently published their experiences. Among others, those of A.Oleari and Baron A.Meyerberg, who travelled through Russia in 1661–62, shed an interesting light on the appearance of Russian people and soldiers. For example, Meyerberg described the *streltsi* as being dressed in long coats with fur lapels, caps, long *kaftans* of smooth scarlet woollen cloth, and leather boots with high heels. Another visitor to Moscow at around the same time wrote that the *streltsi* dressed in light green or dark green *kaftans* according to their regiments, fastened in Russian style with bars of gold lacing across the chest. This proves that in the 1660s the *streltsi* already had different regimentally coloured costumes, though other variants remain unknown.

After their participation in the campaign against the Cossack rebel Stepan Razin, the *streltsi* were re-uniformed in 1674, when they were seen and described by the Swedish officer A.Palmquist. Based on his descriptions and on Russian pictorial material, the *streltsi* parade costume was as follows. A typical pointed or sugarloaf-shaped Russian hat or *shapka* of velvet cloth had fleece or fur trimming, the trim for the privates being of sheepskin while more senior men sported furs such as sable. An outer *kaftan,* again in traditional Russian style, had two short slits in the sides of the skirt; it was fastened from right to left with round or oval buttons and buttonholes decorated with silver or gold tasselled laces; the collar was small, those of senior men being lined with fur. A *zipun* waistcoat worn beneath the *kaftan* was of similar design but shorter and more closely cut, and had no fur trim. Cloth breeches or *porti* reached to just below the calves. Knee-length boots with high heels were of coloured leather, yellow being the most popular shade. Gloves for private soldiers were brown leather with soft cuffs, while officers sometimes had stiffened cuffs decorated with embroidery, lace and a fringe. A coloured waist sash was also decorated with gold embroidery and

Streltsi regiments parading with their banners, in the background of an illustration of a religious ceremony outside Moscow. The city's fortifications (top left) are still made of timber.



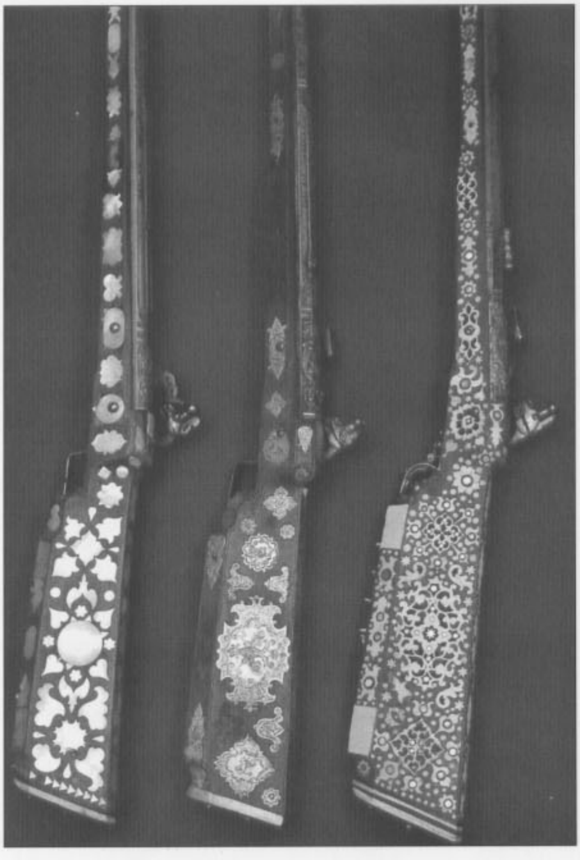
a fringe for commanders, whose field dress was of black, dark grey or brown without laces on the chest. The main distinguishing feature of officers' uniforms was an embroidered cap, rich fur trim to the *kaftan*, and a staff of office.

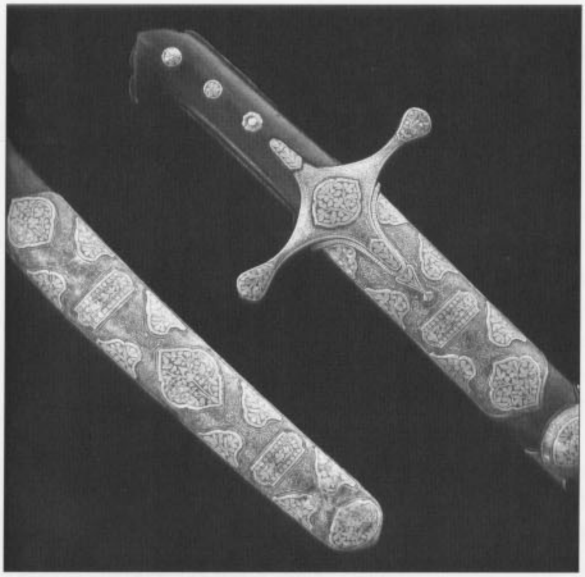
A *streltsi* private had a leather belt with a powder horn, though by the 1670s this had been replaced by leather-covered wooden 'cartridges' strung from a shoulder belt called a *berendeyka*; ten containers held measured charges, and an eleventh held finer priming powder. Most sabres were now of the Polish type, though some musketeers also had Western-style swords. Some *streltsi* were armed with partizans, and a very few had spears. 'Steel hats' were worn, as well as a German-style *schutzenhaube*, although this latter type of helmet is only mentioned once, when *streltsi* took part in the Koshuchovo manoeuvres of 23 September 1694. It is unclear whether the equipment of a *strelets* was his own property, belonged to the state, or was somehow shared. When parading before foreign ambassadors they certainly took rich weapons from the Kremlin arsenal, but returned them afterwards. According to the regulations of 1551, the *streltsi* were not to shave their beards or moustaches. However, we cannot be sure that everyone obeyed these rules; some *streltsi* cut their hair 'into a circle', while others apparently trimmed both beard and moustache.

Streltsi who garrisoned towns and fortresses along the frontiers were not so well equipped as those in Moscow. Some did not have the coloured *kaftans* and instead wore simple dark clothes made of fabric of their own so-called 'wives' production'. Even in Moscow, references to the 'bright' colours of *streltsi* uniforms may only be relative. Although modern experiments have proved that natural dyes made from plants, roots and berries can produce rich colours if fixed with effective mordants, textiles from Western Europe were considered better, and were often offered as rewards or even as part of the wages.

Sometimes *streltsi* served as mounted infantry. Richard Chancellor, an Englishman who visited Russia during the 17th century, described how the Tsar sent two ambassadors to the King of Poland accompanied by at least 500 horsemen. The men and horses were adorned with velvet and gold brocade studded with numerous pearls. He also described how the Tsar's carriage was accompanied by *boyars* riding thoroughbred horses, the procession being led by several dozen mounted *streltsi* with magnificent horse furniture and wearing full dress regalia. In all such cases the *streltsi* played a major role, primarily as the Tsar's bodyguards, armed with heavy handguns and long-hafted axes. Soldiers from Russia's 'Western-style' regiments and the two elite regiments also wore coloured clothing, though it seems that these might be of two possible colours depending upon what could be purchased at the time.

Highly decorated Russian flintlock muskets, made in the second half of the 17th century; obviously, weapons of this quality were available only to the aristocracy. The middle piece was probably made by the gunsmith Grigory Viatkin. (Kremlin Armoury Museum, Moscow)





Sabre, with the locket and chape of its scabbard, made in the Moscow Kremlin Armoury in the mid 17th century. (State Historical Museum, Moscow)

Artillerymen were still dressed in a similar fashion to the infantry, but their *kaftans* and caps were all red. In addition, each artilleryman had a special item of parade uniform called an *alam*. For the elite artillery based in Moscow this consisted of two discs of steel, tin or brass with an engraved or embossed image of a lion's mask with a gun barrel between its teeth; or a similar disc – often gilded – with the image of the Russian eagle holding in its right claw a sword, in its left a gun. Those of urban garrison artillerymen were simpler and lacked the engraved or embossed images, though they were brightly burnished. These discs were slung on the chest and back by leather straps, and for parade purposes were trimmed with black, red and green velvet with a gold fringe. Occasionally Russian artillerymen before the days of Peter the Great worn blue or green *kaftans*, but these were rare. Sometimes they were issued as a form of reward, as one eyewitness recorded in 1690: 'If anybody hit the target, he was given 5 roubles and some smooth woollen cloth of red and green for his *kaftan*.'

Until 1633, foreign soldiers in Russian service dressed in Russian style so as not to attract attention during a period when there was strong anti-foreign feeling in Russia. From that year onwards, however, they were ordered to wear their own costumes because of religious considerations. After 1680 the distinctions became less obvious as a result of the spread of Polish fashions. In 1675 Tsar Aleksey Mikhailovich banned Russians from wearing Western-style clothing under threat of punishment – but Russia would not be Russia unless there were exceptions... In spite of this prohibition the military bands of several Moscow regiments wore typically Western dress of German origin, although it was called 'Holland'. These bands included boy soldiers aged 13 to 16 years playing oboes, flutes and drums, their European coats richly decorated with silver or gold lace; the coats were red, green or dark blue, reflecting their regimental uniforms.

The typical colours of the Tsar's Moscow-based elite regular units – the First Regiment of Shepelev and the Second Regiment of Krakov – would soon be adopted as the colours of the entire guard and Army. The first thousand such troops wore green *kaftans*, the second blue. In 1686 the Second Regiment (at that time called the Regiment of Gordon) was renamed the Regiment of Butyrski, and after 1689 it was issued with red *kaftans*. The First Regiment, which may have been renamed Lefortovski in 1691, wore the same colour. In 1691–92 the Preobrazhenski and Semenovski Regiments were created by Tsar Peter I by dividing the elite Third Regiment, and

***Streltsi* regimental uniforms, 1670**

1. *Regiment of Egor Lytohin*
   Hat – dark grey; kaftan – red, lined white; tabs – raspberry; boots – yellow
2. *Regiment of Ivan Poltev*
   Hat – raspberry; kaftan – light grey, lined raspberry; tabs – raspberry; boots – yellow
3. *Regiment of Vasili Byhvostov*
   Hat – raspberry; kaftan – light green, lined raspberry; tabs – raspberry; boots – yellow
4. *Regiment of Fedor Golovlinski*
   Hat – dark grey; kaftan – cranberry, lined yellow; tabs – black; boots – yellow
5. *Regiment of Fedor Alexandrov*
   Hat – dark grey; kaftan – scarlet, lined light blue; tabs – dark red; boots – yellow
6. *Regiment of Nikifor Kolobov*
   Hat – dark grey; kaftan – yellow, lined light green; tabs – dark raspberry; boots – red
7. *Regiment of Stepan Yanov*
   Hat – raspberry; kaftan – light blue, lined brown; tabs – black; boots – yellow

apparently received the same distinctions as the First and Second 'thousands' (green and blue respectively). Hence regimental colours emerged as the result of these simple subdivisions. Meanwhile, however, junior officers were still distinguished by their red *kaftans*.



Quiver and bowcase of Tsar Aleksey Mikhailovich, made in 1673. (Kremlin Armoury Museum, Moscow)

Infantry and cavalry banners

Each regiment had its own banner; reflecting the Orthodox Christian character of Russian society, the most popular symbols were the cross or images of saints. There were three forms of banner: *prikaznie* (regimental), *sotennie* (company) and 'brotherly' (for every 50 soldiers). Regimental standards were very large and highly decorated, though few in number. Company flags were more commonly used, along with small 'brotherly' flags; both normally consisted of pieces of single-colour fabric with a different coloured fabric cross. The first 'soldier regiments' formed at the beginning of and during the Smolensk war (1632–34) received their standards from the *prikazi* which had ordered them from the Kremlin Armoury, where artists and icon-painters produced such banners. Nine examples of banners for 'new formation' troops, such as waged 'soldiers', dragoons and *reitars*, are actually still preserved in the Kremlin Armoury Museum, dating from the reign of Mikhail Fedorovich. These bear the toothed saltire or Burgundian cross, which had probably been introduced into Russia by Western mercenaries.

Overall there were two main classes of flags, one for colonels or generals, and one for company commanders, sub-colonels, majors and captains. Those of the first class were regimental and were carried by the first regimental company; those of the second class were smaller, and were carried by each company. Regimental standards of the reign of Tsar Aleksey Mikhailovich 'the Timid' bore the six-armed Orthodox cross on the upper left corner, with stars on the rest of the field indicating the unit's number; pictures were also sometimes painted in the centre. It was common for a regimental colonel's standard to be white with a two-headed eagle, mythological or heraldic figure in a different colour.

Dragoon banners were half the size of those of infantry regiments and of swallow-tailed shape; a typical dragoon standard of this period consisted of a square piece of fabric measuring 1.5 *arshin* along each side (one *arshin* = 28in, so 1.5 *arshin* = 3ft 6in) with one or two tails 3 *arshin* long. *Reitar* standards were also square but lacked tails, and were smaller than those of the dragoons. Their traditional emblems were again the Orthodox cross with stars. Each standard had a gold silk fringe and silk tassels. The banners of soldiers, dragoons and *reitars* were, in fact, very similar to those used in Western Europe. The artillery also had its own flags.

Each banner had a fabric cover to protect it from bad weather. The staffs were normally made of ash wood, but as this was scarce in Russia it

was permissible to use oak, pine or maple. The banners of *streltsi* regiments had staffs with a distinctive wooden 'apple' in the centre, though these might also be made of ivory.

Weapons

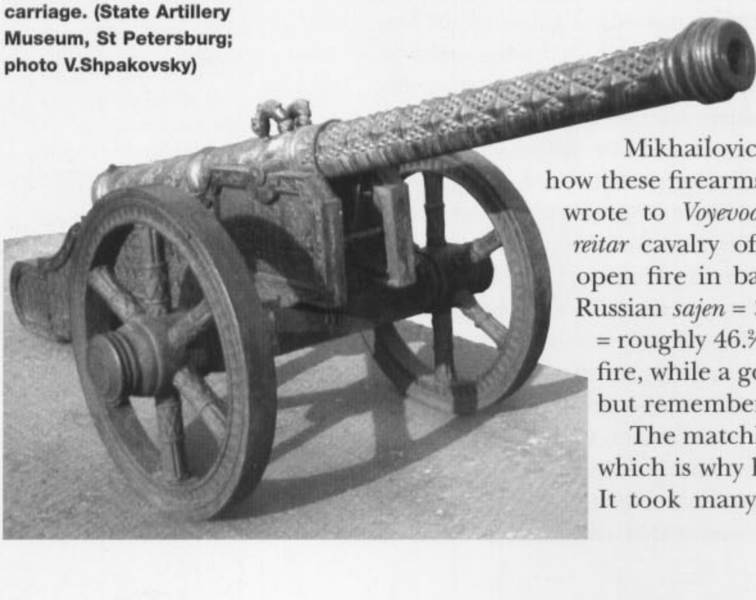
The typical hand weapon of *streltsi* and ordinary infantry until the mid 17th century was a matchlock *pishal* weighing between 13lb and 18lb, of calibres varying from 14mm to 18mm (0.55 to 0.70 inches). According to the calculations of Col Alexander Krafert in 1653, one man needed one pound of gunpowder for 12 'straight' charges, enabling him to fire three practice shots every week. Thus 8,700 soldiers in four regiments required 3½ metric tons of powder, 1½ metric tons of matchcord, and 35½ metric tons of lead bullets. In battle, three or four volleys by such a force consumed 1,763lb of powder, while for a prolonged action four regiments required 3½ metric tons of powder.

During the second half of the 17th century flintlock muskets appeared in Russia, and older *pishals* were sometimes converted into flintlocks. Rifled muskets were also used, but remained rare because of their high cost. Carbines had shorter barrels, and sometimes a limited amount of rifling; such rifled carbines also tended to be modestly decorated with wood carving and ivory inlay. Native Russian gunmaking at Tula, south of Moscow, was limited to only 2,000 *pishals* per year, which is why so many weapons were purchased from Western Europe; in 1631, for instance, about 19,000 muskets (and 5,000 swords) were imported.

During the late 17th century Russian cavalry also used wheellock pistols, decorated in Muscovite style and bearing the marks of Moscow gunsmiths. (In fact, the earliest evidence for the use of pistols in Russia dates to more than a century earlier, in 1538.) One surviving Russian flintlock pistol was made in 1621, by the gunsmith Pervoosha Isaev. Many pistols were, of course, also imported from Western Europe; in 1647, during preparations for the war against Poland, Tsar Aleksey Mikhailovich purchased 2,348 pairs of European pistols, and during the war of 1660 another 2,000 pairs were imported. This indicates that each rider normally carried two pistols; but the government considered this insufficient, and ordered the noble cavalry to supply themselves with *pishals* as well. Tsar Aleksey Mikhailovich personally issued instructions on how these firearms were to be used. In October 1660 he wrote to *Voyevoda* Juri Dolgoruki, ordering that the *reitar* cavalry of Grigori Tarbeev's Regiment should open fire in battle from long range (note that one Russian *sajen* = 3 *arshin* = 6ft 11in = 2⅓yds, so 20 *sajen* = roughly 46.⅔yds): 'The shot at 20 *sajen* is harassing fire, while a good shot from 5 or 3 *sajen* is best of all; but remember to shoot low, not into the air'.

The matchlock *pishal* was a very awkward weapon, which is why horsemen preferred wheellock pistols. It took many successive steps to load it correctly,

(continued on page 33)



17th-century Russian bronze cannon, mounted on a later carriage. (State Artillery Museum, St Petersburg; photo V.Shpakovsky)



16th CENTURY INFANTRY
1: Arquebusier, Muscovy, 1533–84
2: Arquebusier, Russian feudal forces
3: Infantry archer, Russian feudal forces

A

B



16th CENTURY CAVALRY

1: Aristocratic cavalryman, Muscovy, 1533–84

2: *Oprichnik* light cavalryman, Muscovy, 1533–84

3: Feudal follower of Russian landed cavalryman



LATE 16th/EARLY 17th CENTURY INFANTRY
1: *Strelets* of Prince Radzivill, 1564,
2: *Strelets*, Muscovy, late 16th century
3: Urban Cossack musketeer, early 17th Century



WARRIORS OF THE FRONTIERS

1: Tatar auxiliary; Belorus-Lithuania, early 16th C
2: Kazan Tatar armoured cavalryman, mid 16th C
3: Khanty-Mansi warrior, 16th/17th C



MUSCOVITE ARTILLERY
1: Officer, parade uniform, mid/late 17th C
2: Private, blue parade uniform, mid/late 17th C
3: Private, service uniform, late 17th C

E

F


THE COSSACKS
1: Zaporozhian leader, early 17th C
2: Ukrainian Cossack, 17th C
3: Mounted Ukrainian Cossack, late 17th C
1
2
3



COMMANDER & ELITE CAVALRY
1: Aggey Shepelev, Muscovite commander, 1687
2: Great *Voevoda*, Russian landed cavalry, mid 17th C
3: Guard cavalryman, parade costume, early 17th C

G



STRELTSI OF A MIXED REGIMENT; MUSCOVY, 17th CENTURY

1: *Polugolova* (unit commander)

2: *Sotnik* ('commander of 100'), c.1670

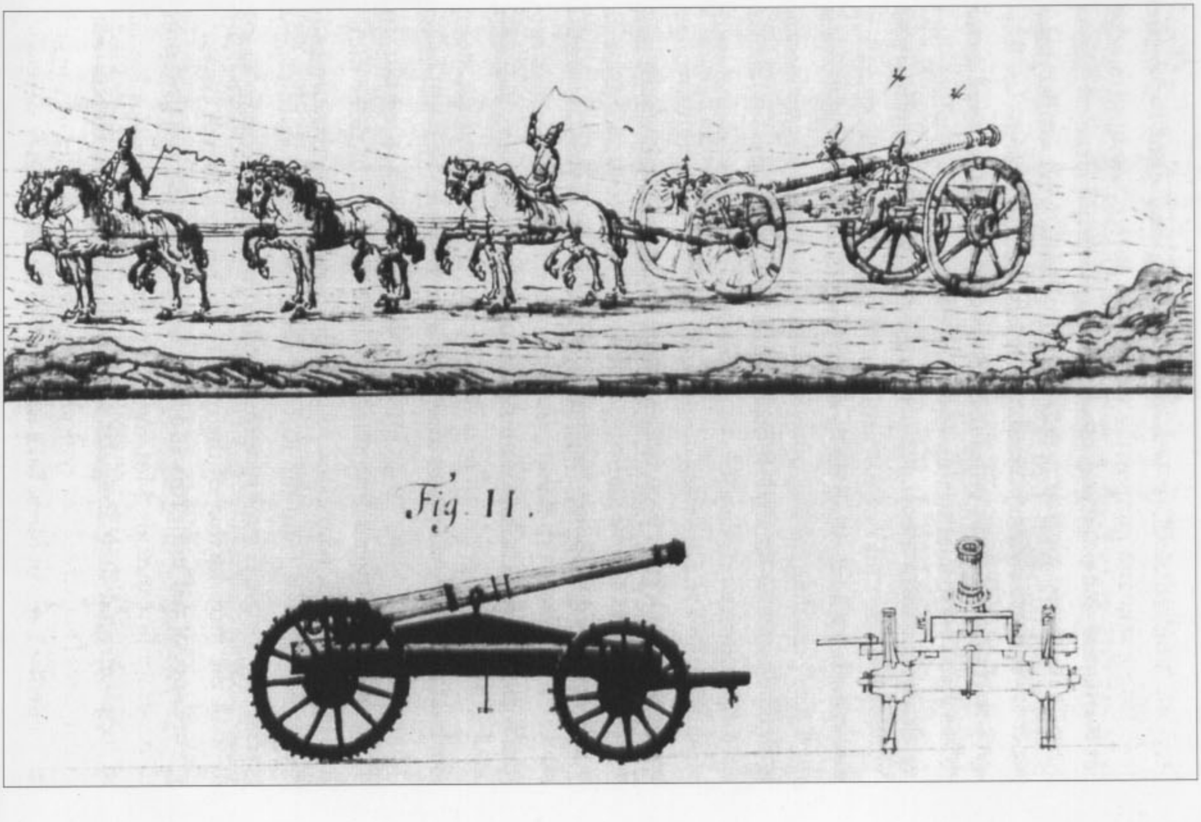
3: *Strelets*

4: Drummer boy, c.1670

meanwhile taking great care with the lighted match. One foreign witness in Russian service recalled how a man named Jakob Stuart had an accident during the musket exercises, wounding an interpreter called Nechai Deriabin, hitting one German soldier in the hand, and burning holes in the clothing of another.

The hussars were ordered to have a 'hussar lance' and two pistols; dragoons also had a pair of pistols, while *reitars* carried these and a carbine. Infantry soldiers and *streltsi* were armed with *pishals, bardiche* axes, spears, and sometimes with hand grenades weighing from 1lb to 4 pounds. (The axes sometimes had holes through the back of the blade; rings threaded through these jingled when the *streltsi* were on night guard duty.) Junior officers were armed with partizans to indicate their rank, the blades being engraved with the Russian two-headed eagle while the wooden shafts were painted black.

Bows were used by the military followers of noblemen and by irregulars. Swords and daggers were of Turkish, Persian and Polish-Hungarian forms, although the *reitars*, dragoons and some others bought swords from the West or had these copied by Russian swordsmiths. One of the main reasons for Russia's limited arms production in this period was the poor quality of local iron ore deposits. High quality metal had to be imported, and in 1629 about 25,000 *pud* (about 4,270 metric tons) of iron ingots were purchased from Sweden at high prices. In 1628 good quality iron ore was discovered in the Ural mountains, but the first yields in 1629–30 were low: just 63 *pud* of pure iron – only one metric ton, from which 20 *pishals*, two anchors and some nails were forged. Since then the Urals have remained the smithy of Russia.



'Russian artillery and artillerymen', another of the invaluable drawings made by a Swedish ambassador in about 1674. The four-wheeled wagon-style carriage is of particular interest, as are the riding gunners carrying long linstocks. (State Historical Museum, Moscow)

Despite the shortage of iron a great many guns were made; as already mentioned, bronze-casting was an old art in Russia. During the Smolensk campaign of the 1630s the army had 151 large guns and 7 mortars; in 1678 there were 3,575 artillery pieces in 150 towns, and by the end of the century the field army marched with between 300 and 350 guns. The Tsar's own regiment, being the largest, had 200 guns, while each regiment of *voyevoda* grade had between 50 and 80. The new 'soldier' regiments had – like the *streletski* regiments – six to 12 guns each. The dragoons also had their own mounted and mobile artillery, with up to 20 guns by the 1680s. Meanwhile the calibres became smaller to increase mobility, being reduced from between 5lb and 10lb charge weight to between 1lb and 3 pounds. New types of cannon also appeared, including breechloaders, rifled cannon, multi-barrelled weapons, and even short guns with 'square barrels' to shoot case shot; the multiplicity of calibres continued to cause problems. During this period Russian gun carriages were painted red, though this would be changed to green during the reign of Peter the Great.

Colonel Krafert produced the interesting calculation that four artillery regiments needed 2,000 spades, 3,000 shovels, 80 crowbars, 200 pickaxes and 400 felling axes when building field fortifications. To transport these and the necessary ammunition they needed 1,500 wagons with draft horses, that is 375 for each regiment.

Character of the 17th-century army

The evidence shows that even before Peter the Great's famous reforms the Russian army had been widely modernized, though it retained several survivals from the past. For example, most regiments were not really permanently embodied, and were often sent home after a war or during the winter months. The *streltsi* might serve one week, but work as craftsmen or merchants the next; and the aristocratic cavalry completely lacked regular training. As one observer wrote:

> 'A great number are called to serve, and if they are examined closely the only result is a feeling of shame... For every enemy killed there are three, four or even more Russians slain. As for the cavalry, we are ashamed to look at them ourselves, let alone show them to a foreigner... Ancient horses, blunt sabres, puny, badly dressed men who do not know how to wield their weapons. There are some noblemen who do not know how to load an arquebus, let alone hit their target. They care nothing about killing their enemy, but think only of how to return to their homes. They pray that God will send them a light wound so as not to suffer much, for which they will receive a reward from the sovereign... And I have even heard noblemen say prayers for God's help to serve without drawing their sword from the scabbard.' (F.C.Weber, *Das Verandere Russland*, Frankfurt, 1744)

These failings were not due to any lack of hardihood among the Russian people themselves, but to the conditions in which the pre-modern Russian state existed. Largely isolated from the high seas and thus from contact with foreign innovations, it was doomed to economic and cultural stagnation. Although good soldiers certainly appeared during the reign

of Peter the Great, they had also been common during the previous centuries. What Peter did was to raise their status and morale, primarily by paying them proper wages. After 2 January 1697 every soldier was promised 6 roubles a year, plus six *chetverti* of rye flour (614.25kg = 1,354lb), two *chetverti* of oats (450lb), one *pud* of salt (36lb), 12 *pud* of ham, 24 *grivenki* (26.4lb) of full cream butter – and a piece of ground on which to build a house for his family. Here it is interesting to note that, until the mid 19th century, military barracks were not erected in Russia.

It is also well known that Tsar Peter I hated the *streltsi*; but in spite of the numbers killed in war, and the fact that the entire corps were converted into ordinary soldiers, the *streltsi* survived as a distinct social group until 1728, by which time their persecutor was himself dead.

Reconstruction of one of the 17th-century wooden towers at Mokshan, near Penza. (Photo V.Shpakovsky)



FORTIFICATION

A timber frontier fortress: Penza

Penza fortress, founded in 1663, was characteristic of the strongpoints near Russia's defensive frontiers in the 1660s. The official description, drawn up on 28 June 1701, stated that it had been laid out when one *voyevoda* town governor was replaced by another. The resulting fortress had eight towers, two of which incorporated gates. One side wall was 113 *sajen* in length (260yds), another 103, the third 106 and the fourth 109 *sajen*, resulting in an irregular plan. The walls were 2 *sajen* and half an *arshin* high (15ft), the ordinary towers being rectangular while the gate towers were hexagonal; the tallest towers were probably 52ft high.

Another fascinating document, the *Building Book* of Penza dating from 13 October 1665, states that the fortress included 45 homesteads for mounted Cossacks, and 86 for infantry Cossacks called 'old *cherkasi*'. The inventory of 28 June 1701 not only described the town but listed its defences. The gate towers and wall towers had 9 cannon on carriages, 4 being of brass and 5 'wall cannon' of iron. In addition there were 2 brass cannon an *arshin* long (28in), for shooting case shot. For this artillery there were 182 *pud* (3 metric tons) of gunpowder, 239 *pud* (3.9 metric tons) of lead, 895 roundshot, 20 *grivenki* (a mere 22lb) of case shot, plus 69 *pud* (just over a ton) of slowmatch for the cannon and other firearms.

When the town was built in 1663 orders were issued for 100 Western swords with their scabbards, and five different coloured fabrics for flags. The garrison consisted of several different groups, including the resident Cossacks both infantry and cavalry, but also artillerymen,



Gate tower of a mid 17th-century Russian wooden fortress, as reconstructed at the Taltsui Architectural & Ethnographical Museum. (Photo V.V.Tikhonov)

watchmen, gate guards, and *reitars* armed with Western swords according to the regulation of the time. There were also *streltsi* in the town, though their numbers are unknown.

Penza was attacked by nomad forces several times. On one occasion a large horde penetrated the outer defences and burned the settlement around the fortress as well as some nearby villages. These raiders were armed not only with bows but with firearms, and even tried to storm the fortress itself. To strengthen the Penza region additional strongpoints were constructed at Mokshan, Narovchat, Verhni (Upper) Lomov and Nijni (Lower) Lomov, all of which are now small towns. The Siberian timber fortresses like Ilimski Ostrog, dating from 1667, were of the same construction.

A stone fortress: Troitse-Sergiev monastery

Stone fortifications were rarer in Russia than wooden fortresses, but several were built in the 16th and 17th centuries. In this programme monasteries played a major role, many being formidably fortified strongpoints. One of the most powerful was the Troitse-Sergiev Lavre or Monastery of the Holy Trinity and St Sergius, which featured prominently in Russia's struggle with the Tatars. It was founded in the mid 14th century and was initially built of wood. During the 16th century a number of important fortresses were constructed around Moscow, and the Troitse-Sergiev monastery became one of the most significant. Its wooden walls were replaced with stone, and in 1608–09 these formidable defences enabled the courageous defenders to withstand a siege by the Poles lasting a full 16 months.

The architecture of such monastic buildings was skilfully adapted for defence. The walls and towers were heightened, the walls being pierced by loopholes on three levels and the towers on four. Higher octagonal towers were built at the most vulnerable corners, with two additional levels of loopholes, which gave the upper parts of these towers an all-round field of fire. They might be able to resist even if the rest of the monastery fell, since each tower also had its own powder magazine, deep beneath the ground inside the massive foundations. Some octagonal towers had high tent-shaped roofs with positions for sentinels. The defensive value of the Troitse-Sergiev monastery was increased by installing artillery, and even two huge cauldrons for pouring boiling oil upon attackers. It was stocked with 600 *pud* (9.5 metric tons) of gunpowder, some of which was kept in a special stone magazine in the courtyard. The monastery's artillery included the normal weapons of that period: *pishali zatinnaya* (heavy wall-mounted guns), *pishali polkovie*

(regimental artillery), case shot guns, multi-barrelled *argunki,* and heavy, long range *kartaun.*

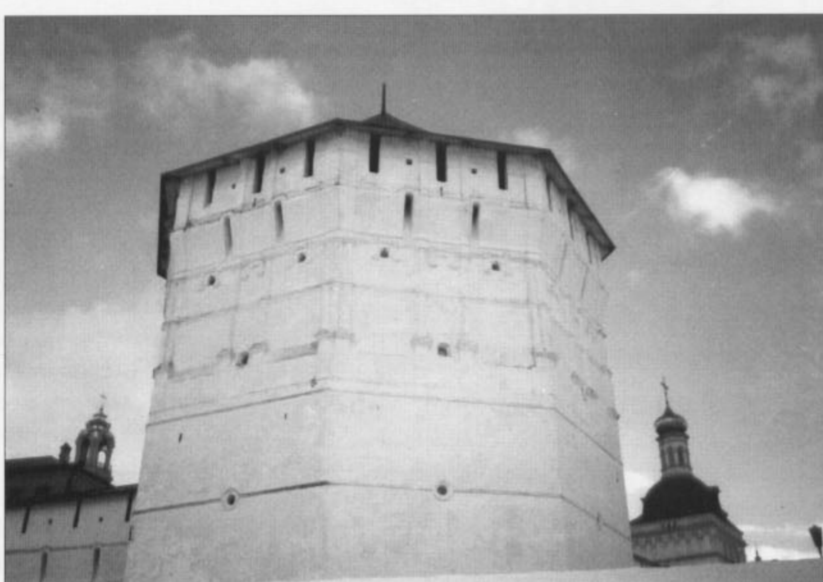


In 1641 the walls of Troitse-Sergiev monastery were 547.5 *sajen* long – 1,260yds – with 90 heavy firearms. (For comparison, the Kremlin of Nizhegorod in 1663 had 1,000 *sajen*-long walls with 83 guns, and the walls of Smolensk in 1651 measured 2,500 *sajen* with 106 guns. The walls of the town and Kremlin of Novgorod the Great were 3,390 *sajen* long – 7,815yds, or nearly 4½ miles – but had only 89 guns in 1649. This indicates the strategic importance of monasteries of only moderate size but defended by concentrated artillery.)

Great Tower and interior of the fortified wall of the 17th-century Spaso Preobrazhenski monastery, Suzdal. (Photo D.Nicolle)

Fourteen years later, the Syrian traveller Paul of Aleppo saw the monastery arsenal and wrote that it contained 'guns beyond counting, handguns large and small in uncalculated numbers, bows, arrows, swords, pistols, spears, mail and iron armour – all better than in Turkish lands'. He also wrote of the monastery's towers and walls that it was 'impossible to imagine its unassailable beauty'. Russian military architects rarely used outworks, but some fortified monasteries had ramparts, moats, ponds and rows of sharpened pickets as well as drawbridges. The staircases inside the wall towers were very narrow, and the loopholes were so well placed that a killing zone up to 100 yards out from the walls was covered by fire from up to a dozen loopholes at any point. Meanwhile the foot of the walls and towers was protected by overhanging machicolations.

The Pyatniskaya Tower, 17th century. Note the typical small gunports on four levels, and the machicolations below the upper storey. (Photo E.Galigozova)



The young Tsar Peter I twice sought refuge in the Troitse-Sergiev monastery, the first time in 1682 when he, his brother Ivan and his sister Sofia hid from the mutinous *streltsi.* Seven years later Peter rode through the gates again with only the shirt on his back, fleeing from Sofia's treacherous plans; and it was from the Troitse-

Sergiev monastery that he launched his campaign to gain total control over the country.

One of the largest stone fortresses in Russia was Smolensk. Its walls were ordered by Tsar Fedor Ivanovich in 1595, though the foundations were actually laid in 1596, under Boris Godunov. The main architect was Fedor Kon', and the work took six years, requiring over 300,000 workers and 100 million specially strengthened bricks. This project enjoyed such absolute priority that during its construction the erection of other stone buildings – and even stoves to heat houses – was banned throughout Russia on pain of death. The walls of Smolensk were just under 4 miles long, mostly to a height of 40ft; they had 38 towers rising to 65ft high, nine of which incorporated gates – the Frolovskaya Tower reached 108 feet. The curtain wall was nearly 20ft thick and had three levels of loopholes, while the towers were four stories high. The foundations consisted of large blocks of white stone laid on oak piles driven into the foundation pits.

RUSSIA'S FRONTIERS

The Cossacks



'Cossack with an arquebus', in a woodcut made in 1622 and published by D.A.Rovinskii in 1884.

The main Cossack hosts were established during the 16th and 17th centuries, although the first mention of Cossacks in Russian annals dates from 1444, with a reference to 'Cossacks from Ryazan'. On that occasion they joined with the Tatars to raid Russian territory, and were described as outlaws. In 1502 the chronicles first mention urban Cossacks from Ryazan who helped to garrison that town. The Don Cossacks are first mentioned in 1570, followed in 1577 by the Terek or Tersk and Grebensk Cossacks. Fourteen years later the Yaik (Ural) Cossack host appears in the sources.

During the late 16th and the first half of the 17th century Cossacks fought both as enemies and as allies of Russia. The Cossacks themselves came from all classes of the Russian people, including escaped criminals who fled to the frontier regions and those fleeing feudal oppression. Such outlaws often returned to pillage Russian lands, but as Orthodox Christians they also fought against Russia's Muslim and Catholic enemies. In fact the Russian Tsars manipulated these communities very skilfully, sometimes sending them gifts of bread and gunpowder, sometimes sending troops to punish the 'thieving Cossacks'. On other occasions, when foreign rulers complained about Cossack depredations, the Moscow government declared that it did not have the power to prevent such outrages. Consequently, the southern and eastern frontiers of Muscovite Russia were adequately protected during peacetime; the Cossacks formed a buffer between Russia and the Tatar Khanates, and were valuable allies during Russia's wars against the Ottoman Turks and Poles.

Nevertheless, officially organized Cossack formations were not included in the Russian army until later. It was not until 1671 that the Don Cossacks became the first to swear allegiance to the Tsar, when 10,000 of them were recruited during the march against Azov. The

military potential of the Cossack hosts was considerable, with the Ukrainian or 'little Russian' Cossacks alone being divided into 20 regiments in 1650: those of Chigirinski, Chernigovski, Kievski, Kropivenski, Pereyaslavski, Prilutski, Mirgorodski, Poltavski, Nejinski, Vinnitski, Cherkasski, Kanevski, Belotzerkovski, Korsunski, Braslavski, Umanski, Kalnitski, Podolski, Povolochski and Torgovitzki. In 1667 ten regiments from the right bank of the River Dnepr entered Polish service, but by 1677 all of them were again considered Russian citizens. In 1687, when the *Hetman* Mazepa became chief of the Ukrainian Cossacks, they numbered 30,000 people. Some 2,000 Cossacks took part in the Chigirins campaigns of 1676–77, and in 1695–97 about 5,000 took part in the siege of Azov under the young Tsar Peter I. Furthermore, Cossacks conquered the whole of Siberia, colonizing the land from the Ural mountains to the Chukotka and the Kamchatka peninsula.

As self-governing communities the Cossack hosts had their own power structures, which were very similar among all of them. Cossack regiments were divided into *sotni* squadrons, each *sotnia* being subdivided into smaller *kureni*. The leader of each *kuren* was an *ataman*, the leader of a *sotni* was a *sotnik*, while the regimental commander was the *polkovnik* or colonel. The leader of the entire Zaporozhian Cossacks was the *kochevoy ataman*, who was elected by a *rada* or assembly of the whole host. Relations between individual Cossacks was based on principles of brotherhood-in-arms.

As a result of their close links with the Tatars, Nogai and Turks, the Cossacks adopted many of their military styles and weapons. For example, they charged in a loose *lava* formation and never used close-rank cavalry tactics. Very often they retreated to lure the enemy into an ambush, dispersing before rapidly reassembling to charge the now disorganized pursuers. To protect themselves from enemy attacks the Cossacks of the southern Russian steppes often used the *tabor*, a movable camp surrounded by wagons and defended by light artillery. The *tabor* was usually triangular in shape, each wagon being linked to the next by chains to form a strong field fortification. Once attackers were disorganized by gunfire, gaps in the wagon-line suddenly opened and Cossack cavalry launched a counter-charge. To maintain uninterrupted shooting with their primitive *pishal* arquebuses the Cossacks developed an unusual system, by which some only loaded the guns for others who did all the shooting.

In 1670–71 the Don, Volga and Yaik Cossacks rose in a revolt which shook the entire Russian state. It was led by Stepan Razin, who was well known among the Cossacks because of his campaign against Persian territory on the Caspian Sea. The rebels were supported by many peasants and tribal peoples such as the Mordovians, Tatars, Chuvashi and Mari. In consequence they eventually controlled a great territory in the Volga region, taking



Supposedly a likeness of Peter Sahaydachny, *hetman* or leader of the Zaporozhian Cossacks in the early 17th century, from a contemporary Russian woodcut. In 1618 he unsuccessfully led an army more than 20,000 strong against Moscow.

25 fortresses and defeating the Tsar's troops in 40 engagements. Eventually the Tsar had to sent an army of more than 30,000 soldiers to crush the revolt. The government also won over a leading Cossack commander, thus dividing the enemy's forces. This treacherous leader's troops then surrounded Stepan Razin in the town of Kagalinsk on the Lower Don, and took him prisoner. Handed over to the Tsar's representatives, Razin was taken to Moscow and horribly executed, by being cut into pieces in Red Square outside the Cathedral of Vasili Blajenni.

Cossack costume was essentially the same in the 17th century as it would be in the time of Peter the Great. However, the 16th-century Cossacks quite often wore mail, helmets, and plate armour of the *zertsalo* type, which consisted of two steel discs on the chest and back. This was effective at the time, since the Cossacks' main foes were Tatars and Siberian tribes usually armed only with bows and arrows.



Contemporary engraving of Stepan Razin, the 17th-century Cossack rebel and river-pirate. His revolt was crushed in 1671 only after the Cossacks inflicted many defeats on Muscovite troops and overran huge tracts of land around the Volga. When Razin was captured he was taken to Moscow, to be dismembered alive in Red Square.

Western Russia and Lithuania

During the 16th and 17th centuries the Grand Principality of Lithuania was Russia's most powerful western neighbour, and the two states fought several wars. Until the end of the 16th century the Lithuanian army largely consisted of foreign mercenaries, mostly infantry with a few cavalry. In both cases the system of recruitment was the same. The *rotmistr* or commander of a company was given money with which to enlist junior commanders from the nobility, these becoming his 'comrades'. Each 'comrade' then recruited a *pocht* or small unit, normally of ten men – his *pochtovih*; the complete company consisted of 15 to 20 such squads. The total number of such mercenaries remained small during the 16th century – between 4,000 and 10,000 men – because there was not enough money to hire more. During the 17th century, however, the number of mercenaries in the service of the Lithuanian principality increased, and during the war with Russia in 1658 they reached 20,000. After that conflict ended in 1667 they again fell to about 6,000–7,000 men; amongst them were Hungarians, Germans, Dutchmen, Englishmen and Irishmen. Partly because their commanders were foreigners, problems of discipline remained considerable.

Most of Lithuania's cavalry were recruited from the local aristocracy, the *shlyahta;* but, as in Russia, the Grand Princes of Lithuania also began to organize dragoon regiments manned by both noblemen and commoners. To these were added some mercenary units or *chorugv's* of 100 to 200 horsemen. The wages of such mercenaries depended upon their nationality; German infantrymen were paid considerably more than footsoldiers from Lithuania, while 'White Rus' (Byelorussians) and Ukrainians received even less. Typical pay in the 16th century was 15.5 *zloty* per year, but by the mid 17th century the annual rate had risen to no less than 230 *zloty.* Sometimes Zaporozhian Cossacks were also recruited, but they proved very unreliable and often arrived only to rob the local population.

The urgent need for regular troops convinced the Lithuanian princes to establish new formations recruited from peasants. Each landowner had to provide one man for each 1,056 acres of his land. The soldier bought weapons with his own money, and only after half a year did he receive his annual pay of 24 *zloty*. Predictably, many landowners did not want to lose their farm workers, and did all they could to disrupt such conscription. On other occasions, however, noblemen gladly took peasants from the fields to make up the numbers of their own regiments; for example, the *knez* (senior nobleman) Janush Radzivill formed a regiment of dragoons in 1649, drawn from volunteers and his own peasants.

The 17th-century Lithuanian army remained quite small, approximately 25,000 to 30,000 strong, and in 1700 it reportedly numbered only 7,400 men. In 1632–38 the Grand Prince Vladislav IV also reformed the artillery, and from then on the entire Lithuanian artillery park came under the command of one general.

FURTHER READING

Alef, G., *Rulers and Nobles in Fifteenth-century Muscovy* (London, 1983)

Armstrong, T. (ed.), *Yermak's Campaign in Siberia* (London, 1975)

Attman, A., *The Struggle for Baltic Markets. Powers in Conflict, 1558–1618* (Goteborg, 1979)

Avrich, P., *Russian Rebels, 1600–1800* (New York, 1972)

Baron, S.H., 'The town in "feudal" Russia', *Slavic Review* 18 (1969) 116–122

Bobrick, B., *Ivan the Terrible* (Edinburgh, 1990)

Brix, H.O.R., *Geschichte des alten Russischen Heeres-Einrichtungen von den Fruhesten Zeiten bis zuden von Peter Grossen gemachten Veranderungen* (Berlin, 1867)

Carr, F., *Ivan the Terrible* (London, 1981)



Another detail from the early 16th-century painting of the battle of Orsha in 1514, showing Russian cavalry (left) driving back Lithuanian Tatars (right). (National Museum, Warsaw)

Cherniatvsky, M., 'Ivan the Terrible as Renaissance Prince', *Slavic Review* 27 (1968) 195–211

Chernov, A.V., *Vooruzhennie sili Russkogo gosudarstva v XV–XVII vv* (Military Forces of the Russian State in the 15th–17th centuries), in Russian (Moscow, 1954)

Crummey, R.O., 'Ivan the Terrible', in S.H.Baron & N.W.Heer (eds.), *Windows on the Russian past* (Columbus, 1977) 57–74

Crummey, R.O., *Aristocrats and Servitors: the Boyar Elite in Russia, 1613–1689* (Princeton, 1983)

Crummey, R.O., *The Formation of Muscovy 1304–1613* (London, 1987)

Dukes, P., *The Making of Russian Absolutism 1613–1801* (London, 1982)

Dunning, C.S.L., *Russia's First Civil War: The Time of Troubles and the Founding of the Romanov Dynasty* (Pennsylvania, 2001)

Esper, T., 'Russia and the Baltic, 1494–1558', *Slavic Review* 25 (1966) 458–474

Fisher, A., 'Muscovy and the Black Sea slave trade', *Canadian-American Slavic Studies* 6 (1972) 575–594

Fennell, J.L.I., *Ivan the Great of Moscow* (London, 1961)

Hellie, R., *Enserfment and Military Change in Muscovy* (Chicago, 1971)

Hellie, R., *Muscovite Society* (Chicago, 1967)

Kagan, F.W.(ed.), *The Military History of Tsarist Russia* (New York, 2002)

Kargalov, V., *Sverzhenie mongolo-tatarskogo iga* (Throwing Off the Mongol-Tatar Yoke), in Russian (Moscow, 1973)

Keenan, E.L., 'Muscovy and Kazan: some introductory remarks on the patterns of steppe diplomacy', *Slavic Review* 26 (1967) 548–558

Keep, J.L.H., *Soldiers of the Tsar: Army and Society in Russia 1466–1874* (Oxford, 1988)

Kleimola, A.M., 'Military service and elite status in Muscovy in the second quarter of the sixteenth century', *Russian History* 7 (1980) 47–64

Kostochkin, V., *Fortress Architecture of Early Russia* (Moscow, nd)

Kradin, N.P., *Russkoe dereviannie oboronnoe zodchestvo* (Russian Wooden Defensive Architecture), in Russian (Moscow, 1988)

Levikin, A.K., 'Russkie gorodskie pushkari 2-oy polovini XVII v. (Russian Urban Gunners of the Second Half of the 17th century)', in Russian, *Questions of History* 3, 1985

Makovskaya, L.K., *Ruchnoe ognestrelnoe oruzhie Russkoy armee kontsa XIV–XVIII vv* (Handheld Firearms of the Russian Army from the end of the 14th to the 18th centuries), in Russian (Moscow, 1992)

Malov, A., 'Gosudarevi vibornie Moscovskie polki soldatskogo stroya. Komandiri vibornih polkov' (The Tsar of Moscow Elite Regular Regiments. Commanders and Staff Officers of the Russian Regular Regiments formed on the Western model in the 16th century), in Russian, *Zeughaus* XIV, (2001) 2–7

Malov, A., 'Russkaya pehota v XVII veke: uniforma, oruzhie, dospehi pehotnih polkov' (Russian infantry in the 17th century: uniform, arms and armour of the infantry regiments), in Russian, *Zeughaus* XVII, (2002) 10–16

Malov, A., 'Znamena polkov novogo stroya' (Banners of the Western-style Regular Regiments), in Russian, *Zeughaus* XV, (2002) 6–10

Margeret, J. (ed.), *The Russian Empire and the Grand Duchy of Moscow* (Pittsburgh, 1983)

Massa, Isaac, (ed. G.Edward Prichard), *A Short History of the Beginnings and Origins and These Present Wars in Moscow under the Reign of Various Sovereigns down to the Year 1610* (Toronto, 1982)
Miller, Y. (ed.), *Russian Arms and Armour* (Leningrad, 1982)
Pallasious-Fernandes, R., 'Moscovskie streltsi 17-ogo v' (Moscow streltsy of the 17th century), in Russian, *Zeughaus* I, (1992) 8–15
Pallasious-Fernandes, R., 'Muzikanti vibornih moscovskih soldatskih polkov' (Musicians of Moscow elected soldiers Western model regiments), in Russian, *Zeughaus* VII, (1998) 7–9
Paul of Aleppo (tr. L.Ridding), *The Travels of Macarius... 1652–1660* (London, 1936)
Platonov, S.F., (tr. J.T.Alexander), *The Time of Troubles* (Lawrence, KS, 1970)
Shpakovsky, V.O., 'The Russian soldiers of Penza fort', *La Figurine* I (Brussels, 1991)
Shpakovsky, V.O., 'Russian warriors of the 17th century', *Military Hobbies* (Aug–Sept 1993)
Shpakovsky, V.O., 'The soldiers of the Terrible Tzar', *Military Hobbies* (Oct–Nov 1991)
Vernadsky, G., *Russia at the Dawn of the Modern Age* (New Haven, 1959)
Zimin, A., *Rossia vremen Ivana Groznogo* (Russia during the time of Ivan the Terrible), in Russian (Moscow, 1982)
Zweguintzov, W., *L'Armée Russe,* 2 vols (Paris, 1967)

THE PLATES

A: 16th-CENTURY INFANTRY

A1: Arquebusier, Muscovy, 1533–84

During the reign of Ivan IV the Terrible the best equipped Muscovite arquebusiers still wore a considerable amount of armour. The fluted helmet, with cheek pieces laced beneath the chin, is probably worn over a mail-covered arming cap. Note that vision was possible through a mail fringe hanging close to the eyes. His mail shirt has a collar stiffened with rawhide thongs. He is armed with a heavy matchlock, and an axe with the lower end of the blade drawn into an extension attached to the haft. Attached to his belt are a large leather pouch, a large powder horn, a small priming horn and the scabbard of his curved sabre.

A2: Arquebusier, Russian feudal forces

Tall helmets of Oriental appearance had been characteristic of Russian soldiers for many years, and continued to be used well into the 17th century. Very thickly quilted 'soft armour' was similarly typical, and both these items almost certainly had Central Asian origins. In addition this hand-gunner's lower arms are protected by mail-and-plate vambraces. His abundant weaponry includes a wheellock pistol; a composite bow in the sort of bowcase which could be seen in the Islamic world, Mongol Asia, India and China, with a quiver on his right hip; an early flintlock musket, but also a rather primitive *sovnya* polearm.



Example of a Russian child's tunic dating from 1542 – a small version of the costume worn by all Russian men except members of the aristocracy. (Historical Museum, Suzdal; photo D.Nicolle)

A3: Infantry archer, Russian feudal forces

Once again, this archer's clothing and equipment are a mixture of Eastern and local styles. His fur-lined hat is worn over a mail coif which includes a steel skull plate. The heavy fur-lined woollen coat is worn over a thickly quilted soft armour, with long fur-lined cuffs which can be turned down in cold weather. The broader upper belt has straps to the scabbard of his sabre, and the long dagger or curved fighting knife in front of his right thigh. The lower, narrower belt carries his quiver, which contains two 'special' arrows in an outer pocket, and, on his left thigh, a bowcase. The upper and lower parts of his soft armour, but not the arms, are lined with iron scales secured by brass-headed rivets.

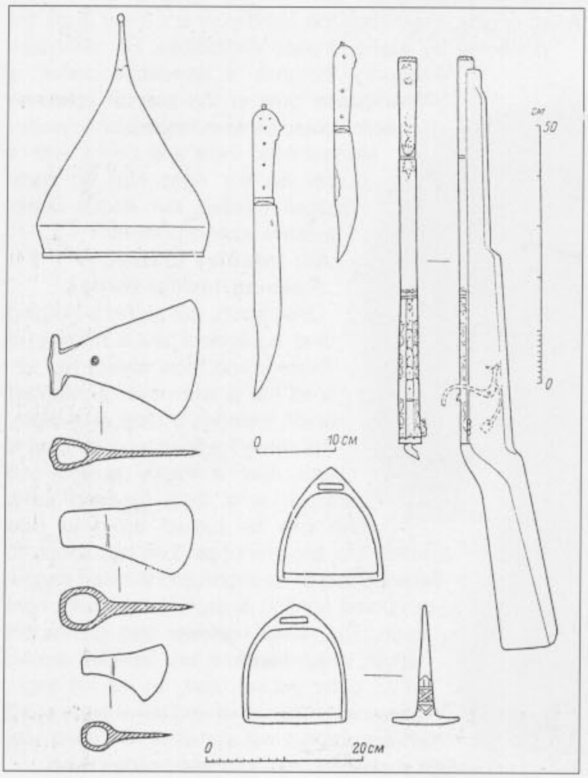
B: 16th-CENTURY CAVALRY

B1: Aristocratic cavalryman, Muscovy, 1533–84

The unfluted one-piece steel helmet became typical of Russia and Persia, but not of Turkey; the mail aventail attached to its rim could be tied beneath the chin. His body is protected by a mail-and-plate cuirass with short mail sleeves, and his lower arms by small undecorated vambraces. His long dagger and archery equipment have more in common with the Islamic world than with the West, though the fluted mace thrust beneath his saddle flap had been adopted throughout much of Europe. The greaves are made of three steel plates joined by narrow strips of mail, that on the outside of the leg extending to protect his ankle. The horse armour is again Eastern in style. It consists of five elements, each made of steel plates riveted to a heavy fabric base, and linked to each other by narrow strips of mail.

B2: *Oprichnik* light cavalryman, Muscovy, 1533–84

Ivan the Terrible's *oprichniki* were mostly light cavalry. His hat is quilted for warmth rather than protection, and the startling contrast between the rich tunic and the rough black fur-lined coat was characteristic of these fearsome horsemen. His soft leather boots would be worn with long-shafted iron rowel spurs, but he also carries a large leather-covered wooden whip, its plaited lashes ending in coloured tassels. He carries a sabre, a leather quiver hung from an archer's belt, plus a bowcase on the left thigh. His saddle blanket is bearskin; note the wolf's head slung on a rope round the horse's neck – the grisly symbol of these ruthless enforcers of the Tsar's will. There are two reins, one for everyday riding and one for battle.



B3: Feudal follower of a Russian landed cavalryman

Quilted soft armour with short, wide sleeves is the most notable feature of this horse-archer; it is closed down the front with wood or horn buttons and loops. The leather sword belt has polished bronze attachments for the straps to a scabbard, while the sabre has a very curved bone-covered grip. The embroidered, fabric-covered bowcase is hung from a short strap to an archer's belt worn below the sword belt; again, a quiver on the right would balance this. Also note the decorated heels and toes of the soft leather boots, and a war-hammer thrust into his belt.

C: LATE 16th / EARLY 17th-CENTURY INFANTRY

C1: *Strelets* or *chotman* of Prince Radzivill, 1564

These musketeers are shown with a *guliay-gorod* field mantlet. The arquebusiers of Belorus, which formed part of the vast Lithuanian empire, were dressed differently from those of Muscovy, though both often used mail armour. This man's fur hat with ear flaps may have been a distinctive local garment. The coat beneath his mail hauberk is closed down the front with carved buttons and loops; the sides of the hem are also slit to just above the knees, and can be closed by a series of buttons and loops. The boots have red heels and soles. In addition to a matchlock musket he is armed with a sabre whose grip incorporates a knuckle guard, while the leather baldric probably carries a cartridge pouch behind.

C2: *Strelets*, Muscovy, late 16th century

Ivan the Terrible's first *streltsi* may have been based upon Ottoman janissary infantry. Their costume was a true uniform, and consisted of a fur-lined black woollen hat and a long, loose-fitting black coat with off-white lining. The sleeves reach the knuckles, and the brass buttons and loops are attached to bars of silk ribbon. The yellow leather boots have prominent iron hobnails and a small toeplate, and the leather belt has iron strengthening points for the straps supporting the scabbard. A leather shoulder strap carries the bullet pouch and wooden powder containers for the matchlock arquebus, while the *bardiche* axe serves as a musket rest.

C3: Urban Cossack infantry musketeer, early 17th century

This Cossack carries a Turkish matchlock. His quilted hat with ear and neck flaps is worn over a helmet, its nasal bar passing through a hole in the front. Beneath an archaic Western European coat-of-plates he wears a mail hauberk, and beneath that again a woollen coat – note the elongated cuffs. Loose boots also provide excellent insulation. The powder horn attached to the shoulder belt is more Turkish than European, as is the knife whose sheath hangs from his sword belt. A short-hafted war-flail is thrust into his belt, but the sabre on his left hip is a more orthodox weapon.

D: WARRIORS OF THE FRONTIERS

D1: Tatar auxiliary; Belorus-Lithuania, early 16th century

The sugarloaf-shaped felt hat seems to have been a distinguishing feature of these troops (see page 41), and

Late 16th-century military equipment found at the Ipatievski Lane archaeological site in 1969. Items include a spired helmet, axe blades, knives, stirrups, and a decorated matchlock *pishal* handgun. (Museum of the History and Reconstruction of Moscow, Moscow)

beneath it some Lithuanian Tatars also wore a close-fitting steel skull cap. The quilted, fur-lined soft armour is worn over a long coat with tapered sleeves; the Russian-style mail-and-plate cuirass has the front and back sheets buckled at the shoulders and each side. The sword belt has regularly spaced bronze stiffeners, which the lower archer's belt lacks. The bowcase and (obscured) quiver are plain, and the leather-covered scabbard has an undecorated chape and mounts. The horse harness is also undecorated, though a saddle blanket might provide some colour.

D2: Kazan Tatar armoured cavalryman, mid 16th century

The magnificence of the Tatar military elite of Kazan contrasts with the simplicity of the previous figure. His mail hood, covering the eyes, incorporates a steel skull plate and is worn over a small turban. The mail hauberk incorporates a few plates over the abdomen and lower back, inlaid with designs typical of Kazan art. He has mail-and-plate vambraces and leg defences, the latter with plates above and mail below the knees. His equipment might include a mace, a battleaxe, a sabre whose scabbard has gilded mounts, and a steel shield with a woollen fringe.

D3: Khanty-Mansi warrior, 16th/17th century

The people of the northern Ural mountains and the Ob river basin were amongst the first to face Russia's expansion in the 16th and 17th centuries. Their clothing and military systems looked similar to those of North American Indians, but their technology and weapons were more advanced. This tribesman's woollen tunic is richly decorated with applied strips, and his soft leather trousers have integral 'boots' of slightly thicker leather. His 'breastplate' is made from layers of elk antler, and his box-like enclosed quiver is carved from wood. The knife sheath is almost covered with a decorative bronze panel; and his heavy bow is made of laminated wood rather than of true composite construction. One arrow has a bronze whistle just in front of the flights.

E: MUSCOVITE ARTILLERY

E1: Officer in parade uniform, mid/late 17th century

The ceremonial appearance of the artillery included some unusual elements. The slit-front floppy hat was similar to contemporary Ottoman artillery uniform; here it is decorated with a brooch, probably – like his necklace – for courage, as again seen in the Ottoman Empire. Over his gold-embroidered blue tunic he wears a fur-lined red coat with long slit sleeves which are tied behind his back. His kid gloves have stiffened cuffs trimmed with gold. The disc-shaped steel *alam* on his chest – and another on his back – have green and gold straps, and are connected with green and gold laces. A green belt has gilded attachment points for the straps to a scabbard, with a gilded chape, mounts and locket.

E2: Private in blue parade uniform, mid/late 17th century

This gunner's helmet was probably imported from Western Europe, but his heavy coat with broad overlapping skirts is distinctively Russian. He wears another version of the decorated *alam* breastplate with an embossed lion mask, and carries a decorated linstock with a thrusting blade. Note his double-knotted sash.

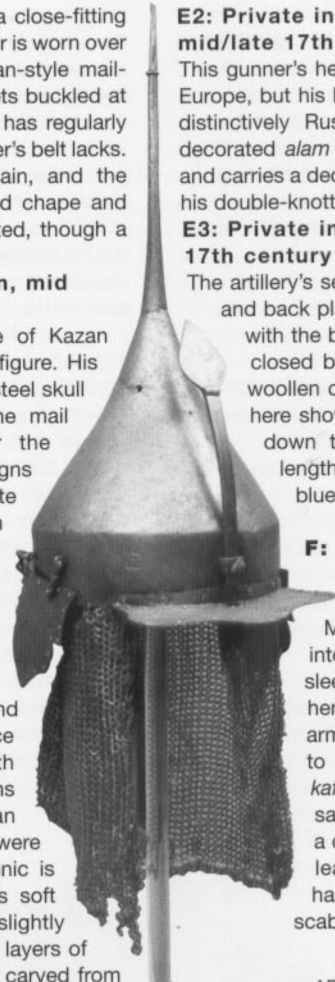
E3: Private in service uniform, Muscovy, late 17th century

The artillery's service uniform lacked the decorative breast and back plates. It consisted of a floppy blue hat, here with the brim turned down, the slit at the front being closed by laces with small brass buttons. The red woollen coat has very long sleeves, one of which is here shown fully extended. The plain brass buttons down the front pass through small loops, with lengths of plain blue ribbon on each side; and the blue sash seems to be tied at the back.

F: THE COSSACKS

F1: Zaporozhian Cossack leader, early 17th century

Many Cossack cavalry wore mail armour well into the 17th century. Here the hauberk's long sleeves pass under the vambraces, while the hem may have been cut down from a longer armour. The mail-and-plate vrambraces extend to protect the elbow. In addition to a long *kaftan* of brocaded silk he has a similar silk sash. His weapons consist of a bronze mace, a composite bow in a leather bowcase, and a leather quiver with tooled decorations, hanging from an archer's belt. The sabre scabbard hangs from a broader sword belt.



ABOVE **Russian helmet, 17th century. (Askeri Muzesi, Istanbul; photo D.Nicolle)**



RIGHT **Flat, rather than concave, example of a 17th-century Russian artilleryman's *alam*, to be worn as a form of ceremonial breastplate (see Plate E). Note the cannon barrel in the jaws of the lion. (State Artillery Museum, St Petersburg)**

F2: Ukrainian Cossack, 17th century

Armour had been discarded by the later 17th century, but the rest of the Cossacks' costume remained traditional, including a Turkish-style sash and a heavy felt cloak with hanging sleeves. A powder horn hangs from a strap over his left shoulder, along with a Y-shaped silver priming flask. A decorated leather pouch is attached to a waist belt, while the galoon ribbon over his right shoulder is probably for his pipe, tobacco and flint. The U-shaped musket rest is decorated with tassels; his other weapons are a sabre and dagger.

F3: Mounted Ukrainian Cossack, late 17th century

The 'horns' on the front of this man's hat result from the brim being slit. The rest of his clothing is essentially the same as that of the previous figure. The butt of his musket is visible on the right side of his saddle; a large wooden water bottle faced with iron is also attached to the rear of the saddle, with a pair of saddle bags. The highly decorated blanket beneath the rear of the saddle may in fact be a captured Turkish carpet, and there is tooled decoration around the leather saddle flap. A large woollen tassel also hangs beneath the throat lash of the bridle, behind which is an embroidered collar.

Front of a 17th-century Russian mail-and-plate sleeved cuirass. See Plate B1. (Askeri Muzesi, inv.16402, Istanbul; photo, D.Nicolle)

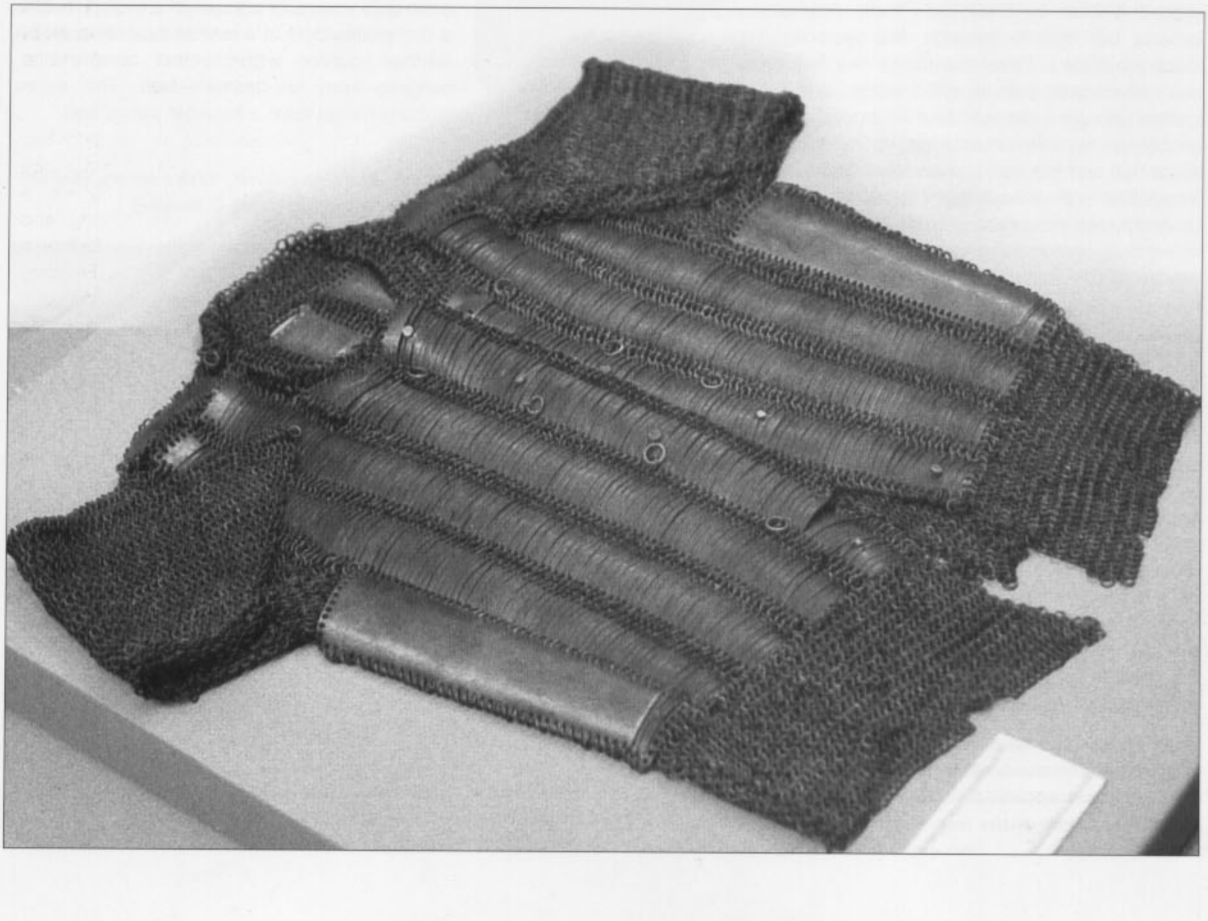
G: COMMANDER & ELITE CAVALRY

G1: Aggey Shepelev, Muscovite chief commander, 1687

For political and cultural reasons, the costume of senior commanders remained highly traditional until the reforms of Peter the Great. Here Shepelev wears a very tall hat of beaver fur, with white feathers in a jewelled gold holder. His fur-lined, loose-fitting, gold-embroidered silk coat is closed at the neck with an enormous gold pendant button. Beneath this coat he wears a thick silk tunic with silver-embroidered laces and silver buttons, and red leather boots with substantial heels. The gilded mace is an emblem of command. The bridle of his Arabian horse is covered with cloth-of-gold or dense embroidery; the metal fittings of the bridle are gilded – even the iron chain 'war reins' – and a gold tassel in a gold holder hangs from a collar. The broad breast strap is decorated in the same manner, and also has pairs of gilded bells. A pair of decorated pistols are carried in decorated holsters at the front of the decorated saddle.

G2: Great *Voyevoda* with banner; Russian landed cavalry, mid 17th century

Although this senior commander looks Oriental to Western eyes, his helmet is of a type which, originating in the Islamic world, had been adopted across most of Europe. His highly decorated mail-and-plate cuirass is edged with coloured fabric fringes, and his vambraces are of a fluted form which gave added strength as well as magnificence. The mail-and-plate greaves are similarly fluted, and his small steel shield is capable of stopping a bullet fired from long range. A flintlock



pistol might be thrust under a sword belt (hidden here) covered with gilded plaques inlaid with semi-precious stones. The gilded iron stirrups are also inlaid with gems, as is the gold sheet across the saddle. His other weapons consist of pistols in saddle holsters, a long straight sword thrust beneath the right side of the saddle, and a curved sabre on his left hip. The horse armour is made of several layers of canvas, covered with interlocking iron plates separated by rows of gilded plates. It has woollen fringes along the lower edges, and quilting along the vertical edges and the chest panel. Note also the gilded leather 'bracelets' on the horse's front legs.

G3: Russian guard cavalryman in parade costume, early 17th century

The horseman's sugarloaf-shaped hat is stiffer than that of many lower status troops; it is also decorated with a silvered band and a gold plume holder. The gold embroidery around his coat is relatively restrained, but the swan's wings attached to his back are extraordinary. His buff leather gloves have stiff cuffs; the boots have high heels, and he wears a silk sash with fringed ends hanging down both sides. His weapons consist of a sabre hung from a leather belt with a gilt buckle and stiffeners, a pair of wheellock pistols in saddle holsters, and a spear with a four-sided blade; during special parades this was decorated with an extraordinary model dragon made of gilded leather. The crupper and breast straps are covered with silvered plaques, and there is a richly embroidered blanket beneath the saddle. The horse's mane is neatly plaited and there is a gilded tassel holder attached to the collar. This and most of the bridle are covered with silver plaques with red fabric edging.



H: *STRELTSI* OF A MIXED REGIMENT; MUSCOVY, 17th CENTURY

H1: *Polugolova* (unit commander)

During the 17th century the Muscovite *streltsi* were divided into regiments with a distinctive style of uniform, which varied in colour but not in cut. There were, of course, also differences between the uniforms of officers and other ranks. Western European influence was reflected in such things as this officer's partizan with its decorated and partially gilded blade; although it could be used as a weapon, it was primarily an insignia of rank. His only real weapon is a sabre hung from a belt with a brass or gilt buckle, strap end and stiffeners. The once floppy fur-lined hat seems to have been stiffened somewhat. Men of *polugolova* rank, like other officers, had red hats, and long bright green fur-lined woollen coats with long 'false sleeves'; side slits in the hems were closed by two short bars of gold thread frogging, with small tassels and gilded buttons. Beneath the coat was a red tunic, with gold embroidered frogging with small tassels and gilded buttons. The green lining of the tunic is visible at the cuffs. The relatively close fit of the dark red trousers may again reflect Western stylistic influence. The yellow leather boots have uncoloured heels and soles, and the decoration of the sash was probably a matter of personal choice.

H2: *Sotnik* ('commander of one hundred'), c.1670

A junior officer or NCO in the same regiment, this *sotnik* has a red hat, and a deep red-brown woollen coat with a fur lining. It is worn over a bright green tunic, probably with a red lining, and red-brown trousers. The semi-stiff cuffs of his whitened leather gloves are edged with gold, and the red leather boots have uncoloured heels and soles. His mark of office is a cane with a silver top, a gold-thread tassel and an iron tip, while his only weapon is again a sabre.

H3: *Strelets*

The uniform of a common musketeer was similar in cut to that of more senior men, but instead of a fur-lined coat with false sleeves he wears a typically Russian heavy coat with a very long hem. The coat is russet-red with green lining, and decorated with gilt frogging, tassels and brass buttons. Green trousers and red boots complete his uniform. He uses his long *bardiche* axe as a rest for his simple matchlock musket; powder containers, a bullet pouch and a spare match hang from a broad leather shoulder belt. In addition he carries a simple sabre in a plain leather-covered scabbard from a separate sword belt.

H4: Drummer boy, c.1670

His dress is a simpler version of that worn by common soldiers. Whether the white fur lining of his hat was regulation issue or a matter of chance is unknown. Otherwise the youngster's uniform consists of a tunic with a yellow collar, green trousers, and soft yellow leather boots without raised heels. His large drum – carried on a white leather sling, and played with notably heavy wooden drumsticks – is decorated in the red and green colours of his regiment. Hidden here is the scabbard of his small sabre, slung from a narrow belt.

LEFT **Russian cavalryman, drawn by the Swedish ambassador to Moscow c.1674, and published by E.Palmquist in 1898. (State Historical Museum, Moscow)**

INDEX

Men-at-Arms · 427

The uniforms, equipment, history and organization of the world's military forces, past and present



Full colour artwork



Photographs



Engravings



Unrivalled detail

Armies of Ivan the Terrible

Russian Troops 1505–1700

It is generally assumed that the reforms that propelled Russia into the modern world were due solely to the genius of Peter the Great at the start of the 18th century. In fact, his reforms were built upon changes that had taken place during the previous 200 years, since the creation in 1550 of Russia's first full-time military force – the *streltsi* – by Ivan IV the Terrible. This fascinating account traces Russia's armies from that beginning, through the creation of paid regular regiments from 1630, up to the reign of Peter the Great. It is illustrated with rare early drawings, photos of surviving artefacts, and dazzling colour reconstructions of exotic military costumes.

ISBN 1-84176-925-8

9 781841 769257

OSPREY PUBLISHING

www.ospreypublishing.com